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AMERICAN JOURNAL OF INSANITY, FOR OCTOBER, 1885.

REPORT ON NEW REMEDIES:*

FLUID EXTRACT CAMELLIA AND HYOSCINE HYDROBROMATE.

BY JUDSON B. ANDREWS, M. A., M. D.,
Superintendent State Asylum for the Insane, Buffalo, N. Y.

Tests in regard to the action of drugs, to be of any real or permanent value, must be made with scrupulous care, with unquestioned honesty and without preconceived theories. They must be confirmed by the concurrent testimony of many observers, and established by the experience of the profession, before the drug can assume its true position in the materia medica. The difficulties encountered in this work arise from the compound character of so many drugs and from the lack of exact knowledge of the elements, which compose even the most simple of organic substances. Analytical chemistry in isolating the active principles and presenting them in a concentrated form, easy of division and administration, has given substantial aid in reaching definite conclusions as to their physiological effects, on which alone we can safely base the practical use in combatting disease. Another serious difficulty in arriving at the exact truth is the fact that we have to deal with the most uncertain and unstable of animate objects, the human organism. The peculiarities and idiosyncrasies of the individual constitute such excep-

* Read before the Association of Medical Superintendents of American Institutions for the Insane, at Saratoga, N. Y., June 17, 1885.

tions to any general conclusions as to throw doubt upon our observations, and prove to us the inexactness of our knowledge.

All investigations into the action of drugs are naturally resolved into the physiological and clinical. The former must precede the latter in any intelligent handling of the subject. We must establish the action of the remedy in the normal healthy system before we can use it intelligently in the abnormal states.

Physiological experiments are naturally divided into those made upon the lower animals, and those in which man is the subject. The first of these can be conducted best in the laboratory of the physicist, but the latter can be successfully carried out by the physician upon himself or upon the person of others.

There are also two methods employed clinically: one the gathering of statistics as to the results of treating disease; and the other, individual observation at the bedside. The statistical method is of all modes of research the crudest and the most unscientific, the most open to inaccuracy and error, and as a natural consequence, that which has been least fruitful in good results. "Of all the advances in practical medicine," says Prof. McLagan, "I can not recall one which owes anything to statistics. I can not mention a single disease in which statistics have inaugurated a better mode of treatment. The mode of research by individual observation is that on which we have to rely; it is that by means of which the most important advances have been made in the past; it is that too by which all methods of treatment must be tested, and on the results of which their adoption or rejection must depend." (*Therapeutic Gazette*, for October, 1884.) This statistical method is one with which the members of this Association are made familiar, as we are often

called upon to give the results of our experience numerically by those who would take advantage of the labors of others, frequently only to advertise themselves in some specialty.

In the investigations we have to present we have joined the two methods, the physiological and the clinical, by individual observation. We have employed the sphygmograph as best representing the effects of remedies on the circulation. Our observations have been made upon camellia and hyoscine.

The fluid extract of camellia or tea has within a few months been offered the profession, by Dr. E. R. Squibb, the well known pharmacist of Brooklyn, to take the place of guarana and coca. He states "that the testimony in regard to the effects of tea, coffee, Paraguay tea, guarana and kola nuts is all of a similar character to that upon coca. Each of these substances seems to have come into use independently in widely separated countries, to produce the same effects, viz., to refresh, renew, or sustain the physical or mental organism, and it was a curious surprise to find, after they had been long used, that although each came from a different natural order of plants, the same active principle, namely, caffeine, could be extracted in different proportions from all. It is now still more curious to find that for centuries another plant, namely, "coca," yielding a different principle, has been in use for similar purposes, the effects of which differ as little from those of tea, coffee, etc., as they do among themselves. Yet cocaine is chemically very different from caffeine, simply producing a similar physiological effect in much smaller doses!" In the experiments by Dr. Squibb he made the tendency to counteract sleep, or to promote wakefulness the measure of the effects of caffeine in the tea and coffee, and compared them

with those of coca. In these tests he found that three grains of caffeine were equal to three fluid drachms of the fluid extract of coca, and to "seventy" minims of the fluid extract of camellia. This seventy minims of the fluid extract equals seventy grains of tea, and this yields 2.01 grs. of caffeine. From this the first notable fact is that about 2 grs. of caffeine in tea, in its natural condition, is equivalent in effect to 3 grs. of caffeine extracted from the tea and used as caffeine. Each fluid drachm of the camellia extract yields 1.72 grs. of caffeine. In the experiments we have made with the extract of tea we have considered it as caffeine, and have given attention to the effect of the drug on the heart, which we present in the sphygmographic tracings. In all of these physiological experiments care was taken to eliminate all known sources of error and to record the exact facts of the various observations. Perfect quiet was enforced for a time before, and also during the period of the experiment. Only necessary conversation was indulged in that the pulse might respond only to the action of the drug; the experiments were made at different times in the day and evening, upon different persons, with doses of varying size, but always within the limits of producing a physiological effect.

The *first* experiment with the camellia was made in the afternoon. I took 70℥ of the extract=to 2 grs. of the caffeine. The pulse beats were then 88 to the minute. In 15 minutes they were 82, and notably firmer and of increased volume; in 30 minutes they were 80, and of the same character. The experiment was then interrupted by my being called away.

The *second* experiment was made in the evening commencing at 9.15. The dose was 80℥=2½ grs. of caffeine. The pulse stood at 80—at 9.30 at 70; at 9.45,

72; at 10.00, 72; at 10.30, 70; and at 11.00, 70. There was the same increase in force and volume as noted in the first experiment.

Special attention was paid to the stimulant effect in warding off sleep and promoting wakefulness, but none existed. I retired immediately after the last record, and went to sleep at once, as is my usual habit.

In the *third* experiment I took 90m = to 24 grs. of caffeine at 4.45 p. m. Pulse was 76. At 5.00 p. m., it had fallen to 70; at 5.15 to 66; at 5.30 it was still 66, and at 6 o'clock it was 72. After supper, at 8 o'clock, I took a second dose of 90m. Pulse stood at 84. At 8.15 at 82; at 8.45 at 80; at 9.00 at 76; at 9.15 at 72; at 9.30 at 74; at 9.45 at 78; at 10.00 at 80.

In the *fourth* experiment I took 3ii of the extract = 33 grs. of caffeine at 9.00 p. m. The pulse stood at 88; at 9.15 at 80; at 9.30 at 78; at 9.45 at 76; at 10.00 at 74; at 10.15 at 72; at 10.30 at 70; at 10.45 at 70; and at 11 o'clock at 72.

In the subsequent experiments the sphygmograph was employed. I took 3ii of the tea = 33 grs. of caffeine at 8.00 p. m. The pulse then stood at 84, and tracing marked No. 1 was taken. At 8.30 the pulse



[No. 1.]



[No. 2.]

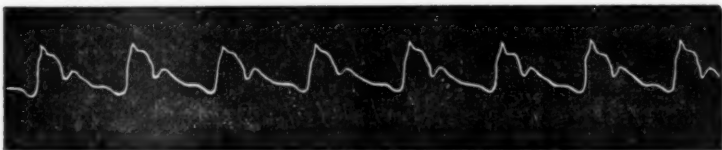
was 80, tracing marked No. 2 was taken. This shows increased tension, more sharply accentuated diastolic,

greater force and slowness. At 9.15 pulse was 74. At 9.30 took a second dose of 3ii , pulse was 72, and at 10 o'clock was 70. Tracing No. 3 was then taken.



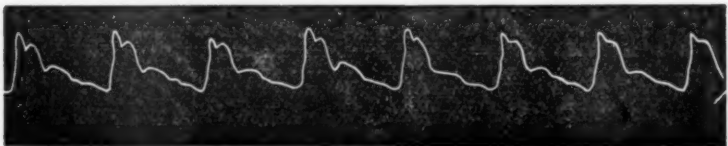
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It has the same peculiarities as the last one, but with a tendency to a second diastolic wave showing increased force. At 10.15 the pulse stood at 60, and tracing No. 4 was taken. This shows the peculiarities of No. 3



[No. 4.]

greatly exaggerated. At 10.30 it was 72, and at 11 o'clock it was 76, when tracing No. 5 was taken. This



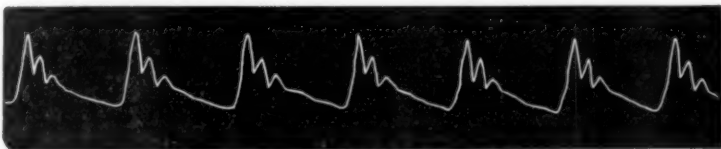
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shows a most extraordinary arterial tension nearly equal to the first beat of the heart.

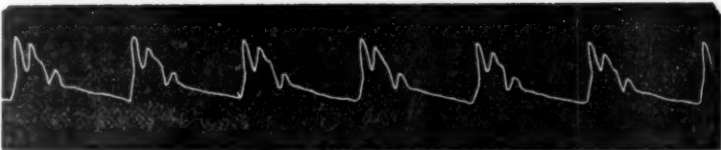
The next experiment was made with 3ii of the extract with the same general results, decrease in the number, but increase in the force and volume of the pulse beats.

On the following day another dose of 3iii was taken = $5\frac{3}{4}$ grs. of caffeine. The pulse beats were 94, but in a half hour they were reduced to 84, and in an hour to 80, where they remained for three-fourths of an hour, when they rose to 84, and subsequently to 86.

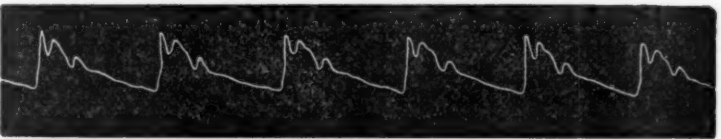
Experiments were then made upon other persons. In the case of a man seventy years of age, the tracings were so marked that we present them. He was given ʒii of the tea= $\text{to } 3\frac{3}{4}$ grs. of caffeine at 4.10 P. M. His pulse was then 66, and tracing marked No. 1 was taken. At 4.40 the pulse was 58, and tracing marked No. 2 was taken. At 5.10 pulse was 54, and tracing No. 3



[No. 1.]



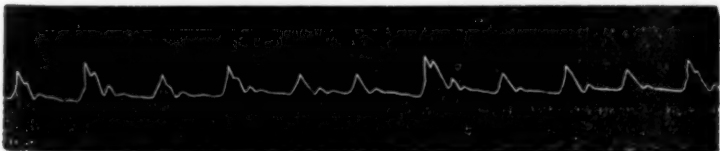
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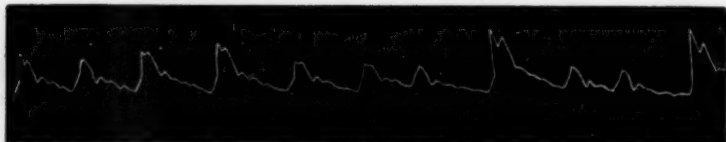
was taken. This shows a great increase of tension and a magnifying of all the peculiarities of the pulse.

In another case in which the patient was suffering from heart disease diagnosticated as hypertrophy with a mitral regurgitant murmur, ʒii of the extract= $3\frac{3}{4}$ grs. of caffeine were given at 2.30 P. M. Pulse was 84, and tracing No. 1 was taken. At 3 o'clock pulse was 80,

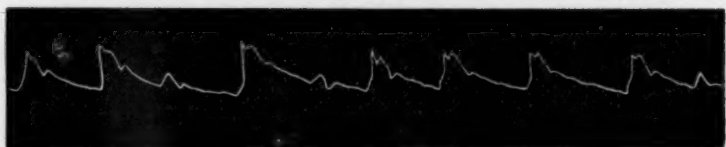


[No. 1.]

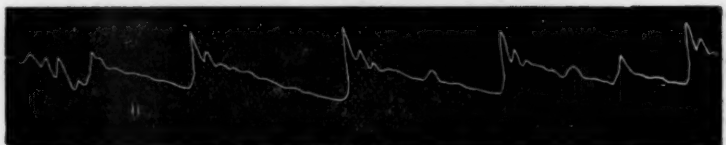
and tracing No. 2 was taken. At 3.30 pulse at 78, and tracing No. 3 was taken. At 4, pulse at 80, and tracing No. 4 was taken. At 4.40 pulse was 82, and tracing No. 5 was taken. The changes presented in



[No. 2.]



[No. 3.]



[No. 4.]



[No. 5.]

these tracings give a fair illustration of its value as a heart tonic, especially in mitral affections. Now as to the deductions to be drawn from these experiments. There is a remarkable uniformity in the action of the drug, in the decrease in the number of the pulsations from 10 to 24 in different experiments and under the influence of varying doses, and in the increase in the force and volume and of the arterial tension.

The full influence of the remedy was experienced in from one-half to one hour after administration. After

remaining stationary for about one-half hour, the pulse began to increase in frequency and regained its normal condition after about another hour. The effect mostly disappeared in three hours from the time of taking it. No wakefulness or increase of mental activity was experienced in any of the cases experimented on. This may be due entirely to individual idiosyncracies, and to the times when it was administered, as the stimulant effect of the drug is well established. We have had but a limited opportunity to use the extract in cases of disease for the purpose for which it seems especially valuable, viz.: as a heart tonic. In one case of extreme anæmia, with feeble and rapid pulse, varying from 120 to 140, it was given a short trial, but the emergency was such that I did not feel warranted in trusting to a remedy with which I had had so little experience, and digitalis was then given with good results. It was subsequently tried again in the same case for a few days, with benefit upon the action of the heart, but its stimulant effect was so marked in the production of wakefulness that it was discontinued. In another case of the same general character, with a pulse of from 106 to 116, a dose of 3ii repeated three times a day gave a reduction to 90, with increase of force and volume. This was continued till the patient was built up by constitutional treatment and no longer needed the remedy. In a case of nervous hysterical condition the same dose was given as a heart tonic with marked benefit. In a fourth case, with feeble circulation, the extract was taken for two months, with relief of the symptoms, by increasing the force of the heart.

While investigating the action of camellia my attention was attracted to an article in the *Therapeutic Gazette* for October, 1884, by Prof. Dujardin Beaumetz,

on the new cardiac medicaments, or those which have been introduced within the last five years. He speaks of convallaria, caffeine and nitro-glycerin, the first two as being applicable to mitral affections, and the third or nitro-glycerin, as of use in diseases of the aortic orifice, and of the aorta itself. He describes the effect in moderate doses, upon the circulation, as diminishing the pulsations, while augmenting the vascular tension. This, it will be noticed, is fully confirmed by our own observations, and by the tracings presented in this paper. It acts then as a heart tonic. In larger doses the hearts beats are accelerated and become irregular. This is the toxic effect, and caffeine has become a poison. He also claims for caffeine special power as a diuretic, and sustains this claim by reference to other writers, whose statements are positive as to its great value in dropsy, and says further that the great advantage of caffeine is that it appears to possess diuretic effects even when the kidneys are badly damaged, and you may get good results with it in advanced stages of heart disease. You will be able to see in our hospital service veritable resurrections effected by this marvelous therapeutic agent, and this in aged persons. Therefore you ought to have these facts always in mind, and remember that in the asystolic period, when you have exhausted the remedial powers of all other cardiac tonics you may still obtain signal success with caffeine.

He recommends its use either by hypodermic injection or by the mouth. In the latter case in doses of from 4 to 8 grs., repeated 3 times a day. The larger doses are needed to gain the full benefit of the remedy as a heart tonic and diuretic. In our experiments with the camellia, while getting the effect of the caffeine as a cardiac tonic, we did not experience any noticeable effect as a diuretic. This may be due in part to the fact that the large doses recommended were not used.

The value of tea as a heart tonic was first brought to my attention by Dr. Gray while I was an assistant in the Utica Asylum. We then used a strong decoction in tablespoonful doses, repeated every twenty to thirty minutes, in cases of threatened failure of the heart, and I have since used it with benefit in the same class of cases. The present investigation explains most satisfactorily the nature and effect of the remedy.

We have proved, I believe, beyond question, that in caffeine we have a most valuable cardiac tonic, rivalling in certain cases digitalis, convallaria and nitro-glycerin. Now if, as Dr. Squibb asserts, 2 grs. of caffeine in tea is equal to 3 grs. extracted, we have in camellia extract an eligible mode of administering this agent. It is inexpensive, readily obtained, easily taken, and not likely to disturb the most delicate stomach.

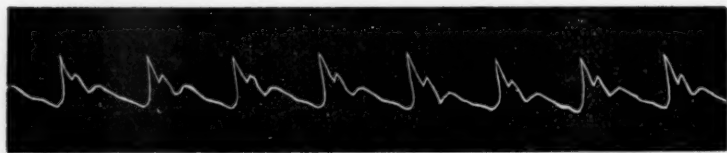
We have not studied the effects of tea as a cerebral stimulant, as we originally intended to do, nor as a substitute for caffeine in the uses for which it is recommended in the materia medica. This is a proper field for investigation, which we hope may receive due attention. We must now satisfy ourselves by commending it to you as a substitute for caffeine as a heart tonic.

HYOSCINE.

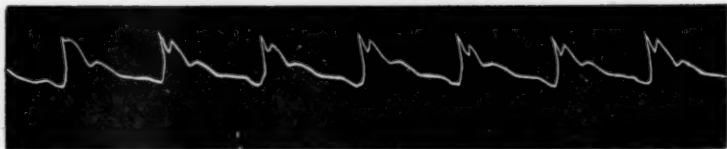
Hyoscyamus, which has from time immemorial been held by the medical profession in such high esteem as a hypnotic, bids fair, by the aid of modern chemistry, to surpass its former reputation. It is but a few years since, that the alkaloid hyoscyamia was brought to our attention, and, this in its two forms, the crystalline and amorphous has hardly taken its place in our materia medica, before its claims are disputed by the new alkaloid hyoscine. Of this there are two chemical combinations, the hydrobromate and the hydriodate. So far

as I am aware, Prof. H. C. Wood was the first in this country to call attention to this preparation, in an article in the January number of the *Therapeutic Gazette*, of which he recently became the editor. Aside from a mere mention of the hydriodate, he gave his attention to the hydrobromate. This is a white crystalline substance, resembling in external appearance the other alkaloids, but unlike them all is tasteless. It is readily dissolved in water, and a solution of 1 gr. to a thousand minims, or the $\frac{1}{1000}$ of a gr. to each 10 minims, is a prescription which admits of easy division for a dose, for administration hypodermically or by the stomach. It is manufactured by Merck, and can be readily obtained at a cost of 75 cents per grain.

Ten minims or the $\frac{1}{100}$ of a grain constitutes a good commencing dose. In testing the drug, the first experiment was made upon myself. I took the $\frac{1}{50}$ of a gr. by the mouth at 8.45 in the evening. My pulse was then 80, and tracing No. 1 was then taken. Tracing marked No. 2 was taken at 9.00 p. m.; pulse



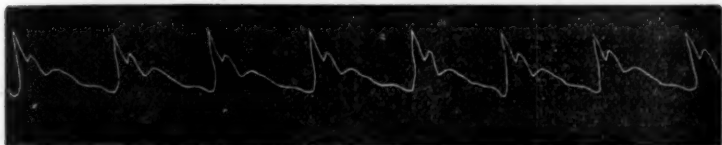
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[No. 2.]

was 70 and pupils were widely dilated, face was flushed and there was a sensation of increased temperature. At 9.30 pulse was 70, and tracing No. 3 was taken; between 9.30 and 9.45 throat was dry, vision disturbed

and I yielded to sleep. At 9.45 was awakened, pulse 68, and tracing No. 4 was taken. At 10 pulse still 68,

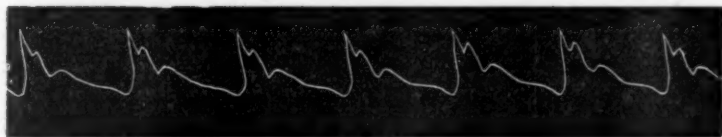


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[No. 4.]

same disturbance of sensation and vision, and drowsiness continued. At 10.30 pulse was 64, and tracing No. 5 was taken. Sleep was then irresistible. I dis-

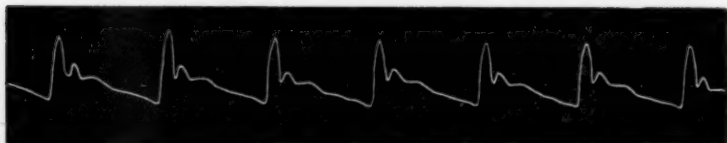


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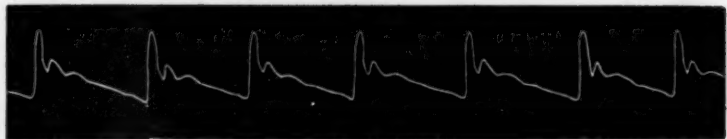
missed the person who was assisting me, and prepared to go to bed. I was very dizzy, movements were with difficulty performed and gait staggering. With considerable exertion I succeeded in removing my clothing and got into bed. During this period and the time before consciousness was lost, I suffered with extreme dryness and a sensation of burning in the fauces. Profound sleep followed and continued till 7 o'clock in the morning. I awoke feeling perfectly natural, and without any discomfort.

The next test was made upon an attendant who took the $\frac{1}{16}$ of a grain, at 8.30 P. M. pulse 82,

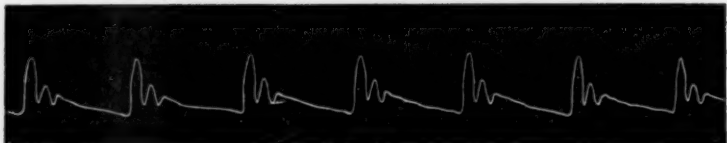
and tracing No. 1 was taken. At 9 pulse 66, and tracing No. 2 was taken. At 9.45 pulse was 60, and tracing No. 3 was taken. Pupils were widely dilated,



[No. 1.]

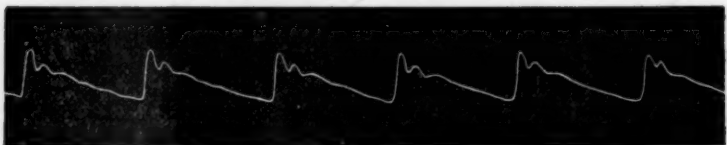


[No. 2.]



[No. 3.]

throat was dry and he was sleepy. At 10.30 pulse was 58, and tracing No. 4 was taken, after which he retired



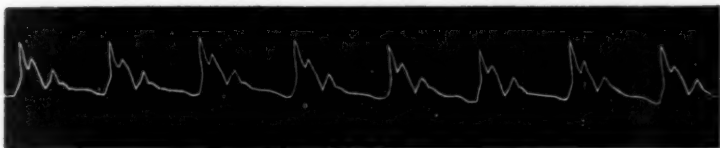
[No. 4.]

without inconvenience, and slept well. There were no unpleasant after results.

The next test was made upon a patient with the τ^1_0 . At 9.45 A. M., pulse was 72. At 10.15, at 62, and pupils widely dilated. At 11 pulse was 51. No other effect was noted, and he was not sleepy.

The fourth test was made, also upon a patient; a large man, 6 feet 4 inches high, and weighing 250 lbs;

$\frac{1}{80}$ gr. was given, at 1.30 p. m. pulse 76, tracing No. 1

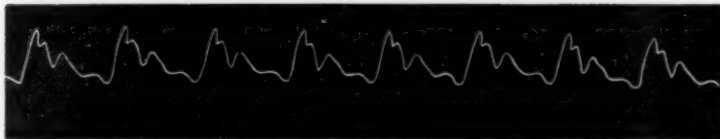


[No. 1.]

was taken. At 2 p. m. pulse 70; at 2.30, 68; and tracing No. 2 was taken. At 3 o'clock pulse 66, tracing No. 3 was taken. Pupils were slightly dilated, but no other effect noted.



[No. 2.]



[No. 3.]

From these experiments we draw the conclusion that hyoscine has a marked effect upon the circulation in reducing the frequency of the pulse. When $\frac{1}{80}$ of a gr. was taken, from 80 to 64 beats, a fall of 14 beats, and in another, under the $\frac{1}{80}$ gr. from 82 to 58 beats, a fall of 24 beats. This decrease was uniformly present in all of the experiments. There was little change, however, in the character of the pulse, save that which was due to the decrease in the number. There was no nausea or disturbance of the stomach, no headache or other unpleasant effect. The only complaint was from dryness of the fauces and disturbance of vision, and these were experienced in the subsequent clinical use of the drug.

Prof. Wood summarizes his physiological experiments as follows:

The peculiar therapeutic value which the physiological study leads us to look for in hyoscine, arises from the union of decided hypnotic powers with a spinal sedative influence, and a very feeble depressant action on the circulation. The experiments so far indicate also freedom from disturbance of the secretions, and unpleasant after effect.

He reports the use of hyoscine clinically in nine cases. Six of marked insanity, two of delirium tremens, and one of hystero-epilepsy. The medicine was given mostly by hypodermic injection, in dose varying from $\frac{1}{100}$ to the $\frac{1}{60}$ of a gr., and with the usually favorable result of controlling the patients, and procuring sleep. In the February number of the *Gazette*, Dr. Wood gives the report of a number of cases recorded by Dr. Chas. P. Henry, Assistant Physician in charge of the male department of the Philadelphia Institute for the Insane. He administered the hyoscine in eight cases, three of which were of melancholia, two of acute mania, one of subacute, one of dementia and one of destructive idiocy. He gave it both hypodermically and by the mouth; the largest dose was $\frac{1}{48}$ of a gr., hypodermically. In some of the cases it was repeated on several occasions. He reports that one great advantage in its administration was the tastelessness of the medicine, and the minuteness of the dose, that it can be given with the food or the drink of the patient, and when these are refused, it can be injected beneath the skin perhaps more readily and with better results than morphia. As to the constitutional effect of the drug, no marked depression of the pulse rate was noticed except in one case, when the extremities became quite cold and the circulation feeble. In only three of the

cases was dilatation of the pupils noted. The temperatures were unaffected and no bad results of any kind were observed to follow the use of the drug. It would therefore appear to be as safe and trustworthy as it is efficacious and powerful.

This is a condensed statement of all that has fallen under our eye, upon this drug. It will be noticed that the conclusions regarding the effect upon the circulation, differ materially from our experience. We now present the cases in which we have employed hyoscine clinically.

Case No. 1—A man with melancholia, who had been gloomy and depressed, but quiet and gentlemanly, suddenly became frenzied, and while in this state bit off a portion of the ear of a demented paralytic, who was sitting quietly on the ward. To control him morphia was given in full doses, but without effect, as he was disturbed through the night and out of bed and noisy. After three nights of sleeplessness and restlessness under the morphia, he was given $\frac{1}{16}$ gr. of hyoscine by the mouth. He was still noisy at night, and excited during the day. The second night the $\frac{1}{8}$ gr. was given at 7.30, and at 8 o'clock the patient was asleep, and so continued till midnight, and the rest of the night was quiet, and was more comfortable during the next day. On the third night he slept under same dose until 3 o'clock, and was free from disturbance in the day. After this he slept all night for several nights, when hyoscine $\frac{1}{8}$ was changed to hyoscyamia $\frac{1}{4}$ gr., with the same good effect.

Case No. 2.—Woman, case of paroxysmal mania, during periods of disturbance is talkative and restless, runs up and down the wards, singing and boisterous, and is sleepless at night. In this condition she was given $\frac{1}{4}$ of a grain twice a day. This controlled her admirably, but she complained of disturbance of vision

from dilatation of the pupil and of dryness of the throat. After four days a change was made to the $\frac{1}{100}$ gr. morning, noon and bedtime. This gave quiet and composure during the day, and sleep at night, and produced less unpleasant effects than the larger dose. After having been continued a number of days, it was stopped to test the effect. The patient immediately became disturbed and maniacal, was emotional, singing, shouting out of the windows, and boisterous in her conduct. The medicine was renewed with the former good effect.

Case No. 3.—Woman, epileptic, extremely nervous, restless, with great muscular tremor. There was marked emotional disturbance, as crying, laughing, accompanied by extraordinary facial movements. At times she was frenzied, noisy, screaming and violent. She was given $\frac{1}{100}$ gr., morning noon and at bedtime; but recognizing the physiological effect of the hyoscine in the disturbance of vision and the dryness of the throat, she at times refused it on this account. When it was taken, however, it overcame the muscular tremor of the face, gave mental calm and quiet, and sleep at night. It was continued for more than six weeks with good results.

Case No. 4.—Woman with melancholia, extremely depressed and suicidal, had been cut down by her husband the day before admission, while attempting to hang herself. At home she was restless and sleepless, a typical case of the disease. She was given $\frac{1}{100}$ gr. at bedtime. At 10 o'clock was visited by the physician and found to be sleeping soundly, and was so reported during the night by the night watch. The same effect followed the administration for two weeks, when she was able to sleep without medicine.

Case No. 5.—Woman, case of chronic mania with periods of great disturbance, caused by the delusion that men came into her at night to ravish her. The noise from her outcries was something unusual even in

the most maniacal wards of an asylum. All of the patients and attendants, not only upon her ward, but upon the wards above and beneath, were broken of their rest for a large part of the night. The changes were rung upon full doses of the ordinary hypnotics, both alone and in combination, but with unsatisfactory results. For a time she was controlled by allowing a light from the ward to shine through the transom of her room; this, however, soon failed, and she was as noisy as ever. This seemed a good case on which to try the effect of hyoscine, and she was given $\frac{1}{15}$ of a grain by the mouth, which controlled her fully, and gave sleep. After being used for two weeks, it was stopped for two nights, but the patient was again noisy. It was then resumed, and has now been used for more than a month with the same success reported above.

Case No. 6.—Woman, acutely maniacal and very feeble from loss of sleep and refusal of food. The first night after admission, took no medicine and slept none. The second night was given hyoscine $\frac{1}{100}$ gr. hypodermically, and slept all night. The medicine was then continued in doses from $\frac{1}{100}$ to $\frac{1}{15}$ gr., with varying results, at times giving two or three hours sleep, again a good night's rest, and again failing to give any sleep. Other hypnotics were tried without any result. After struggling along in this way for two weeks or more, the patient began to improve, and passed beyond the need of sleep-producing agents. We were obliged to treat several abscesses produced by the injections.

Case No. 7.—A woman with acute mania, with great physical exhaustion. She had been kept in jail for a week, during which time nothing was done for her, and she neither eat nor slept. She took food voluntarily after admission, and was given $\frac{1}{100}$ gr. subcutaneously; she went to sleep in fifteen minutes, and slept

from 9 P. M. till 3 A. M. This continued for three nights. She did not rally, though taking food and gaining sleep, but continued to fail and died from exhaustion.

Case No. 8.—A man with melancholia, had been in the asylum for some months. He was quiet and comfortable till Sunday, the 25th of April, when he suddenly became frenzied, insisting that he was to be killed, was screaming and rocking to and fro in his chair and entirely uncontrollable. Was given $\frac{1}{80}$ gr. by the mouth. In two hours he was quiet, and toward evening quite sleepy, and slept well all night. His frenzy continued and the hyoscine was given in $\frac{1}{80}$ gr. doses during the day, and $\frac{1}{80}$ gr. at night. It partially controlled the patient during the day and uniformly gave good sleep at night.

Case No. 9.—Woman with melancholia, restless and sleepless, given $\frac{1}{80}$ gr. at bedtime and slept all night. The same dose repeated in the morning produced deep sleep and so overcame the patient that she was unable to leave her bed. The dose was subsequently reduced to $\frac{1}{160}$ gr. in the daytime and $\frac{1}{80}$ at night. This was continued for a month with excellent results.

Case No. 10.—Woman with dementia, very feeble both mentally and physically. She did not respond to conversation or recognize those about her; was restless, getting out of bed, clinging to those who entered her room so that it was difficult to get away from her, and was sleepless. Hyoscine in $\frac{1}{160}$ gr. dose was given; the restlessness disappeared, and she slept all night. The control was gratifying and complete.

Case No. 11.—Woman with violent mania; noisy, restless and disturbed. She took hyoscine for some six weeks in increasing doses from the $\frac{1}{160}$ to the $\frac{1}{32}$ during the day, and to the $\frac{1}{40}$ during the night. The medicine but slightly controlled the maniacal disturbance in the day, but gave fair sleep at night.

Besides these cases, which we have given in more or less detail, we have administered it in nine more cases of women and two of men patients.

Of the nine, six were quiet, but restless patients, with mild melancholia. It was given in doses of from $\frac{1}{320}$ to $\frac{1}{160}$ of a grain, with the effect of controlling the restlessness and muscular agitation, and producing greater comfort. In one case of acute chorea it was combined with constitutional treatment of arsenic and cod liver oil, and exercised a marked control over the opisthotonos and violent muscular movements, and gave sleep at night. The acute symptoms lasted about two weeks, and in three weeks the disease had subsided. Of the two remaining cases among the women, one was of chronic melancholia, and the other one of acute mania. The remedy, however, was given very irregularly from the persistent refusal to taking anything. The results were unsatisfactory.

Of the two remaining cases among men, both were acutely maniacal. The medicine given in $\frac{1}{40}$ gr. doses was much more efficient in producing sleep at night than in controlling the violence during the day.

We report in all twenty-two cases in which hyoscine has been employed. Of these eleven are of melancholia six of acute mania, one of chronic and one of paroxysmal mania, one of mania with epilepsy, one of dementia and one of acute chorea.

The limits of the doses was from the $\frac{1}{320}$ to $\frac{1}{32}$ of a grain, in all of which I found it a perfectly safe remedy. It was given by the mouth in twenty of the cases, and in two by hypodermic injection, and in one of these it was followed by painful abscesses. This, I think, was due to the debilitated condition of the patient produced by specific disease.

The physiological effect of the drug was experienced in from fifteen minutes to two hours, but the average

time was less than one hour. The pupils were dilated in most of the cases, but the disturbance of vision and the dryness of the fauces, or the inhibition of muscular movements, was only complained of in the two cases mentioned, but in many of them there was such a degree of mental disturbance that the absence of complaint is of little value in arriving at a knowledge of the existence of these unpleasant effects. There was no nausea, and in the few cases, in which it was given sufficiently long to produce the results, there was no disturbance of the appetite with consequent loss of flesh, as is sometimes experienced in the continued use of hyoscyamia. There is also less disturbance of the vaso-motor system than is found in the use of that alkaloid. It would seem from the experiments that it is a powerful sedative to both the cerebral and spinal system, and from the success attending its use, and for the reasons stated above, it would seem justly entitled to a high position in the list of hypnotic remedies, and will, I think, surpass in favor the sister alkaloid of hyoscyamia.

The following letter was received from Dr. Henry M. Hurd, co-member of the Committee on New Remedies:

EASTERN MICHIGAN ASYLUM, PONTIAC, MICH.,
June 12th, 1885.

DEAR DR. ANDREWS:

Your letter of recent date was forwarded to me at San Francisco. I hoped when I wrote you to be able to present a few clinical data respecting several remedies which in my experience had proven serviceable in the treatment of insane conditions, but find upon my return home so great a pressure of work in connection with the erection of two new infirmaries or hospitals, it is impossible for me to carry out my original intention. In order however not to fail wholly in my duty as a member of the Committee on New Remedies, I have decided to give a hasty sketch of the peculiar properties of the California "loco," or "rattle weed." By these titles are known a variety of weeds belonging to the order Leguminosæ. The more common ones met

in California are botanically known as *astragalus crotalaria*, *astragalus lentiginosus* and *oxytropis lamberti*, and the poisonous properties of all seem about equal. These weeds are not unlike a lupine in general appearance. They have a large, fleshy, succulent stalk, and grow luxuriantly upon the plains and table-lands of California. The weed grows during nearly the entire year, and the plant flowers early and successive crops are produced. The flowers are in clusters and have a greenish-white or yellow hue, and the fruit is an inflated pod about the size of the dwarf pea. This pod, when pressed upon, bursts with a sound like a toy torpedo, and when ripe and dry it remains upon the stalk to rattle in the wind. Hence the name "rattle-weed." The Spanish word "loco" which means foolish or crazy, is applied to the plant because of its peculiar effect upon horses, cattle or sheep who feed upon it. Ranch-men and stock-growers state that no animal will eat of it unless driven to the step by great hunger. When all other herbage fails animals at first pasture upon it sparingly and merely to sustain life. After eating it for several days they begin to crave it, and soon prefer it to any other forage. It has been noticed that a horse who has become accustomed to eating loco will refuse all good food and wander for miles in search of the plant. It seems to produce a sort of intoxication at first, and afterwards hallucinations of vision. It is impossible to lead the horse through a gate or into a barn. He walks mincingly, magnifies the size of trifling objects in his path, shies without any cause, and becomes unmanageable. He seems apprehensive of danger, and can neither be coaxed nor driven. His gait becomes unsteady, and he is manifestly ataxic. He pays little attention to his driver. He stands with drooping head and seems indifferent. It is difficult to get him started and equally difficult to stop him. He becomes headstrong, indifferent to the bit, and extremely dangerous to drive. If driven into the water or near water, he rushes headlong into the stream, and often lies down and refuses to rise. He refuses all food except loco, and rapidly emaciating dies of exhaustion. There is often great cutaneous hyperæsthesia, especially in the region of the neck and about the face. If the horse is struck under the jaw, ever so lightly, with the flat of the hand, he struggles violently, and frequently throws himself backward upon his head. All power of reasoning is gone, and he seems utterly unable to control his morbid impulses. If the horse be removed from the plant at an early stage of his disorder, and starved into eating other food, the disease may be arrested, but complete

time was less than one hour. The pupils were dilated in most of the cases, but the disturbance of vision and the dryness of the fauces, or the inhibition of muscular movements, was only complained of in the two cases mentioned, but in many of them there was such a degree of mental disturbance that the absence of complaint is of little value in arriving at a knowledge of the existence of these unpleasant effects. There was no nausea, and in the few cases, in which it was given sufficiently long to produce the results, there was no disturbance of the appetite with consequent loss of flesh, as is sometimes experienced in the continued use of hyoscyamia. There is also less disturbance of the vaso-motor system than is found in the use of that alkaloid. It would seem from the experiments that it is a powerful sedative to both the cerebral and spinal system, and from the success attending its use, and for the reasons stated above, it would seem justly entitled to a high position in the list of hypnotic remedies, and will, I think, surpass in favor the sister alkaloid of hyoscyamia.

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recovery is impossible. The horse is ruined. Cattle are affected in much the same way. They lose all ability to care for themselves, and wander about in a dazed, confused state, and die from exhaustion. They are frequently tormented by a persistent thirst, and instinctively seek water, which they lie down in. In many instances they drown in a few inches of water, because too indifferent or too stupid to make any effort to get out of it. Sheep also are similarly affected. They lie down and refuse to graze. If nutritious food is placed within reach no attention is paid to it. If food is placed in the mouth the animal masticates and swallows it, but makes no effort to procure any more.

Under the present system of fenced stock ranges in California animals suffer much less than formerly. When open ranges were common they frequently became overstocked during dry seasons, and when large numbers of cattle were compelled to eat every green thing a large proportion of them suffered from loco poisoning.

The effects of loco upon man have not been studied. The statement is made that sheep herders, who live far from vegetables, have been known to shell the peas from the pods and after cooking to eat them with impunity. It is very possible that if this were done frequently injurious effects would follow.

My object in this imperfect sketch of the effects of the plant is to bring it to the notice of the members of the Association, with the hope that some member will thoroughly investigate its physiological and therapeutic properties. It will be noticed that the effects described are due to the use of poisonous doses. It is possible that in physiological doses carefully administered it might prove curable to certain forms of insanity. It belongs to a large family of plants which has produced valuable remedies, like Jamaica Dogwood and Calabar Bean. It certainly deserves further study to ascertain its range of therapeutic utility—if it possesses any.

I procured a quantity of the plant when in California, with the intention of making an extract for experiments upon the lower animals, but it became damaged during the journey home and proved worthless for pharmaceutical purposes.

Regretting that I have been unable to do more to further the work of your committee, I remain,

Sincerely yours,

HENRY M. HURD.

THE CURABILITY OF INSANITY.

A STATISTICAL STUDY.*

BY PLINY EARLE, M. D.,

Superintendent of the State Lunatic Hospital at Northampton, Mass.

Notwithstanding the manifold triumphs of medicine, of surgery, and of other sciences and arts, there are inexorable limits to their achievements and their power of achievement. Nature yields in a measurable extent to the conceptions, the devices, the ministrations, and the administrations of human skill, but, as if to mock them in the end, and to demonstrate the retention of her inherent supremacy, she at length establishes a position and defies their power. These are trite truths, so trite, indeed, that the mention of them is an apparent superfluity: and yet they answer my purpose as an introduction, and are not wholly inappropriate at the beginning of a paper in which their truthfulness receives another illustration.

Nowhere are these truths more conspicuous, than in the sphere of the enterprises to overcome the disabilities of what are termed the defective classes of mankind—defective from imperfections either congenital or acquired. It is, indeed, perhaps true that, in the treatment of the blind, in the attempt to obtain a substitute for the eye and thus open an avenue of perception to the imprisoned brain, although nothing has been discovered which is, by very far, a full equivalent of the perfect natural organ, the success has equalled the expectation. But in reference to some of

* Read before the Association of Medical Superintendents of American Institutions for the Insane, on retiring from office as its President, at Saratoga, N. Y., June 16, 1885.

the other classes this is not true; and the hopes and confident anticipations awakened in the public mind, in the comparatively early periods of the modern endeavors at improvement, have been doomed to at least a partial disappointment.

Some forty years ago, when the efforts of Dr. Guggenbühl, in Switzerland, to elevate the idiot from his congenital degradation had been imitated in other parts of Europe, the world of philanthropy and the world of thought were startled by the announcement of a certain degree of success; and this, in the minds of the people, was magnified to such an extent as to give the general impression, that idiocy is so far amenable to culture that the great mass of its subjects can be raised nearly to a level with the average of the race. But, after the experience of a sufficient number of years to furnish a reliable test, it is found that, although partial imbeciles are susceptible of a degree of elevation in a ratio inverse to the degree of mental defection, and although, with the inclusion of the idiot, the advantages acquired are more than sufficient to vindicate the enterprise, yet the congenital idiot is essentially the congenital idiot still.

The history of the instruction of deaf mutes in vocal language is similar, in these respects, to that of the attempts to redeem the idiot from his infirmity. Surprising results were attained in some instances, and public opinion, taking its shape and tone from these, leaped to the conclusion that, although deafness might continue, permanent mutism was soon to become a thing of the past. Experience has not yet shown that a majority of deaf-mutes are susceptible of satisfactory instruction and achievement in this method of intercommunication.

A similar exaltation of belief and of expectation has

occurred in the specialty in which we are engaged; and, unfortunately, a similar disappointment has awaited all who had become interested in the subject, whether in the profession or among the people at large.

It is proposed, in this paper, to show, by the collocation of statistics, the actual results of treatment at a large number of institutions, both foreign and domestic, bringing our knowledge of such general results to a later date than that contained in any former statistical essay.

RECOVERIES AT BRITISH ASYLUMS.

It will be remembered that the reports of many, if not most, of the British asylums, contain a table, originally designed by Dr. Thurnam, in which the admissions, discharges, recoveries and deaths of patients are classified according to the duration of the insanity.

These classes are as follows:—

1st. First attack, and within three months, on admission.

2d. First attack, above three and within twelve months, on admission.

3d. Not first attack, and within twelve months, on admission.

4th. First attack or not, but of more than twelve months, on admission.

5th. Congenital and unknown.

This is a well conceived and useful table for its intended purpose; and, if prepared with sufficient care and discrimination, can not well fail to throw light upon the question of curability as affected by duration, or by the fact of first or subsequent attack.

Nearly two years ago I collated the statistics of this table in a series of the annual reports of twenty-three

of the British asylums, so far as relates to all cases of less duration than twelve months at the time of admission. For more than fifty years, all such cases have, in the United States, been called *recent*, in contradistinction to those of remoter origin, which have been called *chronic*; and my object in collecting the statistics was to ascertain the degree of curability to which those asylums had attained in the treatment of what we call recent cases.

Of each of twelve of the asylums these statistics, which are embodied in Table I, extend over a series of six consecutive years, the last of which was, in some instances, 1882, and in others, 1883. At three of the asylums they extend over five years; at one, over four years; and at seven, over three years. At each asylum the years are consecutive; and at no one is the last of the series later than 1878, the majority being either 1880, 1881, or 1882.

The results of these statistics may be briefly stated.

1st Class, (First Attack, less than 3 months duration) the admissions were 8,316; recoveries, 4,051; per cent of recoveries, 48.71.

2d Class, (First Attack, 3 to 12 months' duration) admissions, 2,613; recoveries, 764; per cent of recoveries, 29.24.

3d Class (Not first Attack, less than 12 months' duration) admissions, 4,768; recoveries, 2,640; per cent of recoveries, 55.37.

By uniting the first two classes, we have all cases of first attack and of less duration than one year. Of these, the admissions were 10,929; the recoveries, 4,815; and the proportion of recoveries, 44.06 per cent.

Of the third class the admissions were 4,768; the recoveries, 2,640; and the proportion of recoveries, 55.37 per cent. Here we have another illustration of the fact that recovery takes place in a less proportion of

TABLE I. CASES OF LESS THAN TWELVE MONTHS, AT TWENTY-THREE BRITISH ASYLUMS.

ASYLUMS.	Years inclusive.	CASES OF FIRST ATTACK, WITH DURATION.										NOT FIRST ATTACK.	
		Under Three Months.			Three to Twelve Months.			Under Twelve Months.			Total Under Twelve Months.		Per ct. of recoveries
		Adm.	Recov'd.	Per ct. of recoveries	Adm.	Recov'd.	Per ct. of recoveries	Adm.	Recov'd.	Per ct. of recoveries	Adm.	Recov'd.	
Somerset and Bath.	1877-82	499	189	37.88	166	80	48.19	665	269	40.45	326	148	46.25
Devizes	1877-82	289	120	41.52	109	20	18.35	398	140	35.18	198	80	40.40
Abergavenny	1877-82	285	141	49.47	102	24	23.53	387	165	42.64	167	101	60.48
Carmarthen	1877-82	108	57	52.78	50	16	32.00	158	73	46.20	79	37	46.84
Derby County	1877-82	397	180	45.34	112	41	36.61	506	221	43.42	225	128	56.89
Hereford	1878-83	121	66	54.55	62	23	37.10	183	89	48.63	108	56	51.85
South Yorkshire	1877-82	1,251	565	45.16	214	55	25.70	1,465	620	42.32	693	335	48.34
Prestwich	1877-82	1,203	671	55.78	243	63	25.93	1,446	734	50.76	541	319	58.96
Lancaster	1877-82	654	393	60.09	344	90	26.16	998	483	48.40	444	309	69.59
Warwick County	1878-83	228	124	54.39	116	31	26.72	344	155	45.06	111	63	56.76
Edinburgh Roy.	1878-83	755	381	50.46	298	98	32.89	1,053	479	45.49	673	381	56.61
Belfast	1877-82	444	234	52.70	147	49	33.33	591	283	47.88	112	74	66.07
Retreat, York.	1876-80	40	20	50.00	21	9	42.86	61	29	47.54	36	13	36.11
Garthavel	1875-79	541	227	41.96	126	22	17.46	667	249	37.33	235	108	45.96
Cambridge and Ely	1877-81	213	85	39.90	58	9	15.51	271	94	34.69	76	40	52.63
Barning Heath	1877-80	553	259	46.84	183	54	29.50	736	313	42.53	362	195	64.57
City of London	1880-82	62	27	43.55	28	10	35.71	90	37	41.11	44	28	63.64
Berrywood	1878-80	181	71	39.23	58	28	48.28	239	99	41.42	102	39	38.23
Worcester	1879-81	169	81	47.93	73	15	20.55	242	96	39.67	113	82	72.57
Nottingham	1877-80	119	54	45.38	31	12	38.71	156	66	44.00	44	19	43.18
Beverly	1876-78	87	44	50.57	23	2	8.69	110	46	41.82	42	20	47.62
Crichton	1877-79	47	25	53.19	14	4	28.57	61	29	47.54	30	21	70.00
Southern Counties	1877-79	70	37	52.86	35	9	25.71	105	46	43.81	73	44	60.27
Totals		8,316	4,051	48.71	2,613	764	29.24	10,929	4,815	44.06	4,768	2,640	55.37
Mean or Average per cent.													47.49
Aggregate													

of admissions 15,697; of recoveries 7,455.

cases of first attack than in cases subsequent to the first—a fact which was demonstrated in an article on curability in the report for 1880 of the Northampton Lunatic Hospital.

By a union of the three classes, all of which contain, exclusively, cases of less than twelve months in duration, and are consequently here known as recent cases, we obtain the subjoined results.

Admissions, 15,697; recoveries, 7,455; proportion of recoveries, 47.49 per cent.

Among this series of twenty-three asylums is the Retreat at York, the statistics of recoveries at which, from 1796 to 1819, have been quoted, ever since they were published, as one of the authorities for the eminent curability of mental disorders. It may not be uninteresting to bring into juxtaposition those statistics of three-fourths of a century ago, and those of the same institution for the five years from 1876 to 1880 inclusive. This is done in the following table.

TABLE II. PER CENT OF RECOVERIES AT THE YORK RETREAT OF CASES OF LESS DURATION THAN TWELVE MONTHS.

	Per Cent of 1ST CLASS.	Per Cent of 2D CLASS.	Per Cent of 3D CLASS.	Per Cent of TOTAL.
1796—1819	85.10	55.55	51.76	68.25
1876—1880	50.00	42.86	36.11	43.30
Decrease of per cent,	35.10	12.69	25.65	24.95

The diminution of the proportion of recoveries on the admissions is, for the 1st class, 35.10 per cent on the admissions; for the second class, 12.69 per cent; for the third class, 25.65 per cent; and for the whole, 24.95 per cent, or, in round numbers, one-fourth of the admissions.

The proportion of diminution from the actual recoveries of the first period, is, for the first class, 41.17

per cent, or a fraction more than two-fifths; for the second class, 22.84 per cent, or a fraction more than one-fifth; for the third class, 41.53 per cent, or a fraction over two-fifths; and for the whole, 36.25 per cent. In other words, for each hundred of recoveries of what we call recent cases, three-fourths of a century ago, there are but sixty-four (63.75) recoveries now.

Some months after the collection of the foregoing statistics, but before any use had been made of them, Dr. T. A. Chapman, of the Hereford Asylum, England, published a similar but much larger collection, in *The Journal of Mental Science* for July, 1884. It contains the statistics of "46 English County and Borough Asylums, and the Edinburgh and Glasgow Royal Asylums, for (in most instances) 11 years, 1872 to 1882 inclusive." Here is a collocation of the remarkable number of 93,443 cases of insanity, all of them classified as in the foregoing table. The whole number of recoveries was 35,468, or 37.95 per cent of the admissions. But as the recoveries of *recent* cases are now, alone, under consideration, we will turn our attention especially to them. The subjoined table shows the numbers, and the percentage, in each of the first three of Thurnam's classes.

Dr. Chapman's table includes, apparently, twenty-eight Asylums that are not in mine, and mine has five that are not in his. Of these five, two are in Scotland and three in England, the Retreat at York being one.

In regarding these two tables, so much alike and yet so different, almost the first impression received from them is the striking similarity of results. These are, indeed, so nearly identical as to justify one's faith in the sometime possibility of a close approximation to accuracy in this branch of vital statistics. The difference in the proportion of recoveries, as indicated

cases of first attack than in cases subsequent to the first—a fact which was demonstrated in an article on curability in the report for 1880 of the Northampton Lunatic Hospital.

By a union of the three classes, all of which contain, exclusively, cases of less than twelve months in duration, and are consequently here known as recent cases, we obtain the subjoined results.

Admissions, 15,697; recoveries, 7,455; proportion of recoveries, 47.49 per cent.

Among this series of twenty-three asylums is the Retreat at York, the statistics of recoveries at which, from 1796 to 1819, have been quoted, ever since they were published, as one of the authorities for the eminent curability of mental disorders. It may not be uninteresting to bring into juxtaposition those statistics of three-fourths of a century ago, and those of the same institution for the five years from 1876 to 1880 inclusive. This is done in the following table.

TABLE II. PER CENT OF RECOVERIES AT THE YORK RETREAT OF CASES OF LESS DURATION THAN TWELVE MONTHS.

	Per Cent of 1ST CLASS.	Per Cent of 2D CLASS.	Per Cent of 3D CLASS.	Per Cent of TOTAL.
1796—1819	85.10	55.55	61.76	68.25
1876—1880	50.00	42.86	36.11	43.30
Decrease of per cent,	35.10	12.69	25.65	24.95

The diminution of the proportion of recoveries on the admissions is, for the 1st class, 35.10 per cent on the admissions; for the second class, 12.69 per cent; for the third class, 25.65 per cent; and for the whole, 24.95 per cent, or, in round numbers, one-fourth of the admissions.

The proportion of diminution from the actual recoveries of the first period, is, for the first class, 41.17

per cent, or a fraction more than two-fifths; for the second class, 22.84 per cent, or a fraction more than one-fifth; for the third class, 41.53 per cent, or a fraction over two-fifths; and for the whole, 36.25 per cent. In other words, for each hundred of recoveries of what we call recent cases, three-fourths of a century ago, there are but sixty-four (63.75) recoveries now.

Some months after the collection of the foregoing statistics, but before any use had been made of them, Dr. T. A. Chapman, of the Hereford Asylum, England, published a similar but much larger collection, in *The Journal of Mental Science* for July, 1884. It contains the statistics of "46 English County and Borough Asylums, and the Edinburgh and Glasgow Royal Asylums, for (in most instances) 11 years, 1872 to 1882 inclusive." Here is a collocation of the remarkable number of 93,443 cases of insanity, all of them classified as in the foregoing table. The whole number of recoveries was 35,468, or 37.95 per cent of the admissions. But as the recoveries of *recent* cases are now, alone, under consideration, we will turn our attention especially to them. The subjoined table shows the numbers, and the percentage, in each of the first three of Thurnam's classes.

Dr. Chapman's table includes, apparently, twenty-eight Asylums that are not in mine, and mine has five that are not in his. Of these five, two are in Scotland and three in England, the Retreat at York being one.

In regarding these two tables, so much alike and yet so different, almost the first impression received from them is the striking similarity of results. These are, indeed, so nearly identical as to justify one's faith in the sometime possibility of a close approximation to accuracy in this branch of vital statistics. The difference in the proportion of recoveries, as indicated

by the two, are, for the first class of cases, only one-one-hundredth (.01) of one per cent; for the second class, one and three-hundredths (1.03) per cent; for the third class, one and seventy-six-hundredths (1.76) per cent; and for the total, ninety-seven-hundredths (.97) of one per cent.

TABLE III. RECOVERIES OF CASES OF LESS DURATION THAN ONE YEAR.

CLASSES.	Admissions.	Recoveries.	Per Cent of Recoveries.
CLASS I.			
1st attack; less than 3 months' duration,	38,283	18,654	48.72
CLASS II.			
1st attack; 3 to 12 months' duration,	12,126	3,421	28.21
CLASS III.			
Not 1st attack; less than 12 months' duration,	19,574	10,494	53.61
Total,	69,983	32,569	46.52

When Dr. Woodward, in 1833, took charge of the Worcester Hospital, he had before him, as exemplars, three well known pioneers in the field of high percentages of recoveries. Dr. Burrows, in 1820, had reported 91.32 per cent as the result of the treatment of 242 cases, of which 221 recovered. He also published the results, from 1797 to 1819, at the York Retreat, where, of 47 cases of less duration than three months, the recoveries were 40, or an equivalent of 85.10 per cent.* In 1827 Dr. Todd, at the Hartford Retreat, reported that, of 23 recent cases admitted 21 had recovered, a proportion of 91.3 per cent. In 1841,

* The fact should not be overlooked that, if the word *recent* be used in its American signification, applying to all cases of less duration than one year, the proportion of recoveries at the Retreat was only 68.25 per cent, the admissions being 126, and the recoveries 86.

Dr. Woodward obtained his highest proportion of recoveries, 91.42 per cent, by the treatment of 70 cases, 64 of which recovered; and in 1842, Dr. Galt, at the Williamsburg, Virginia, Asylum, excelled all of his predecessors in the announcement that of thirteen recent cases under his care twelve had recovered, a percentage of 92.3.

Here we have five different, well-known medical authorities, each confirmatory and corroborative of the others, and all of which have, for an average of half a century, been regarded as a kind of oracular proclaimers of the possible achievement of recovery in about 90 per cent of recent cases. Yet, singularly enough, the whole of the five separate reputations were built, and the oracles established, upon the treatment of an aggregate of only 395 cases.

On the other hand we have before us, in Dr. Chapman's table, the results of treatment of a number of recent cases which lacks but seventeen to make it seventy thousand, and the recoveries are only 32,569, or 46.52 per cent. This ratio of curability is only 86 hundredths of one per cent more than half as large as that which was claimed by Dr. Burrows, and only 37 hundredths of one per cent less than one-half as large as that of Dr. Galt. Even in the cases of first attack and of only three months' duration, of which there were 38,283, the recoveries were but 18,654, or 48.72 per cent. In the light thrown upon the subject by this unparalleled collection of recent cases, what becomes of the once exceedingly fashionable assertion that "from seventy-five to ninety per cent can be cured?"

RECOVERIES AT THIRTY-NINE (13+24) AMERICAN INSTITUTIONS.

Inasmuch as neither Thurnam's table nor its equivalent in any other form is used at the American

institutions, it is impossible to group, or analyze the results at the latter on precisely the same basis, in all respects. Nevertheless, upon looking over the American reports, I find that a large amount of matter may be brought together, illustrative of the proportion of the reported recoveries of recent cases.

In the statistics of a majority of our hospitals, although, in reference to admissions, the duration of the insanity is given, and hence a distinction between recent and chronic cases rendered possible, yet no such discrimination is made in regard to patients discharged. The subjoined table contains the results, in regard to recovery, for a series of from two to six years, of fifteen American hospitals, in the reports of which the recoveries of cases of less than twelve months' duration are numerically given. The time during which each hospital furnished these statistical results was at Elgin, six years; at Concord, Worcester, Taunton, Utica, Harrisburg, Dixmont, Dayton, and Ossawatimie, five years each; at McLean, Northampton, Danvers, and Columbia, S. C., four years each; and at Boston, and Winnebago, three years each; the period ending, in most cases, in 1883.

The aggregate of the admissions of *all cases* is 14,562; the aggregate recoveries, 3,780; and the proportion of recoveries, 25.96 per cent. The largest proportion was 35 per cent, at Dayton; and the smallest, 18.58 per cent, at Harrisburg. At five others it was less than 23 per cent, and at still five others less than 30 per cent; while at three besides Dayton, it was over 30 per cent.

The aggregate of admissions of *recent cases*, is 8,063; that of recoveries of recent cases, 3,112; and the proportion of recoveries of recent cases, 38.59 per cent. The largest proportion is 46.95 per cent, at Dayton;

and the smallest, 26.96 per cent, at Columbia, S. C. Of the thirteen others, the proportion at one was less than 30 per cent; at two, between 30 and 35 per cent; at five, between 35 and 40 per cent; and at five between 40 and 45 per cent.

TABLE IV. WHOLE NUMBER OF RECOVERIES, AND RECOVERIES OF CASES OF LESS THAN TWELVE MONTHS' DURATION, AT FIFTEEN AMERICAN INSTITUTIONS.

ASYLUMS.	Yrs.	ADMISSIONS.		DISCHARGED RECOVERIES.				
		Under 12 mos.	Whole number.	Under 12 mos.	Per ct. of recent cases.	Whole number	Per cent of whole number.	Per ct. of all recoveries on rec't admissions
Elgin	6	488	1,017	197	40.37	246	24.19	50.41
Concord	5	334	536	148	44.31	161	30.04	48.20
Worcester	5	593	1,254	191	32.21	254	20.26	42.83
Taunton	5	824	1,619	300	36.41	369	22.79	44.78
Utica	5	1,518	2,184	661	43.54	716	32.78	47.17
Harrisburg	5	395	716	117	29.62	133	18.58	33.67
Dixmont	5	646	1,117	238	36.84	288	25.78	44.58
Dayton	5	607	977	285	46.95	342	35.00	56.34
Ossawatimie	5	398	707	165	41.46	217	30.69	54.52
McLean	4	207	308	81	39.13	89	28.90	42.99
Northampton	4	224	511	75	33.48	104	20.35	46.43
Danvers	4	962	2,078	361	37.53	458	22.04	47.61
Columbia, S. C. ...	4	408	702	110	26.96	161	22.93	39.46
Boston	3	174	275	66	37.93	80	29.09	45.98
Winnebago	3	285	561	117	41.05	162	28.88	56.84
Totals, and Mean per cent	68	8,063	14,562	3,112	38.59	3,780	25.96	46.88

Finding that, in despite of the traditional "75 to 90 per cent" of some of the fathers, not one of these hospitals discharged even 47 per cent of recoveries of recent cases, while the mean, or average of all of them was less than 39 per cent, I studied the relation between the *whole number of recoveries* and the number of *admissions of recent cases*. The whole number of recoveries is larger by 668 than the recoveries of recent cases; and the number of admissions of recent cases is 6,499 smaller than the whole number of admissions. Yet, strange as it may appear, the total of recoveries is only 46.88 per cent of the admissions of recent cases! The largest proportion, 56.84 per cent, is at Winnebago;

and the least, 33.67 per cent, at Harrisburgh. Of the remaining thirteen hospitals, the proportion is less than 40 per cent at one; between 40 and 45 per cent, at four; between 45 and 50 per cent, at five; between 50 and 55 per cent, at two; and over 55 (56.34) per cent, at one. Thus, after aiding and assisting the recoveries of recent cases by a supplementary and a complimentary gift of the certainly not despicable number of 668 cases, we have been unable to swell them even to 50 per cent of the admissions of recent cases.

We now come to the hospitals which give the duration of the disease in the cases admitted, but give no such information in respect to the cases discharged. The following table includes the statistics, for a term of from two to six years each, of twenty-four institutions of this class. Of six of them—Jacksonville, Ill., Mt. Pleasant, Iowa, Fulton, Mo., St. Joseph, Mo., Lincoln, Neb., and Jackson, La.—the term was six years; of eleven—Hartford Retreat, Ct., Middletown, Ct., Middletown, N. Y., Trenton, N. J., Danville, Pa., Williamsburg, Va., Richmond, Va., U. S. Government Hospital, Washington, D. C., Jackson, Miss., Cleveland, Ohio, and Longview, Ohio,—five years; of six—Brattleboro, Vt., Staunton, Va., Weston, W. Va., Pontiac, Mich., Madison, Wis., and St. Peter, Minn.,—four years; and at one—Augusta, Me.,—three years.

The total of admissions is 18,756; the total of recoveries, 5,933; and the proportion of all recoveries on all admissions, 31.63 per cent. The largest percentage of recoveries 48.54, was at Fulton, Mo., and the smallest, 15.83, at Danville, Pa. Of the remaining 22 institutions, the proportion was less than 23 per cent, at four; from 25 to 30 per cent, at five; from 30 to 35 per cent, at five; from 35 to 40 per cent, at three; from 40 to 45 per cent, at three; and from 45 to 46 per cent, at two.

TABLE V. RECOVERIES AT TWENTY-FOUR AMERICAN INSTITUTIONS.

HOSPITALS.	ADMISSIONS.			DISCHARGES.		
	Years.	Under 12 months' duration.	Total Admissions.	Total Recoveries.	Per cent of recoveries on all Admissions	Per cent of all recoveries on admissions of less than 12 months' duration.
Jacksonville, Ill.,	6	1,000	1,605	440	27.41	44.00
Mt. Pleasant, Iowa, . . .	6	852	1,548	400	25.84	46.95
Fulton, Mo.,	6	675	1,162	564	48.54	83.56
St. Joseph, Mo.,	6	435	740	257	34.73	59.08
Lincoln, Neb.,	6	414	654	237	40.83	64.49
Jackson, La.,	6	83	231	63	27.27	75.90
Hartford Retreat,	5	300	434	150	34.56	50.00
Middletown, Ct.,	5	492	1,168	241	20.63	48.98
Middletown, N. Y., . . .	5	503	775	300	38.71	59.64
Trenton, N. J.,	5	373	786	244	31.04	65.42
Danville, Pa.,	5	263	695	110	15.83	41.83
Williamsburg, Va., . . .	5	165	380	171	45.00	104.00
Richmond, Va.,	5	357	559	254	45.44	71.15
U. S. Gov't Hospital, . . .	5	549	1,099	357	32.48	65.03
Jackson, Miss.,	5	235	526	228	43.35	97.02
Cleveland, O.,	5	681	1,135	414	36.48	60.79
Longview, O.,	5	470	882	325	36.85	69.15
Brattleboro, Vt.,	4	199	344	88	25.58	44.22
Stanton, Va.,	4	207	467	201	43.04	97.10
Weston, W. Va.,	4	186	328	104	31.71	76.47
Pontiac, Mich.,	4	320	707	145	20.51	45.31
Madison, Wis.,	4	307	746	163	21.85	53.09
St. Peter, Minn.,	4	486	1,168	267	22.86	54.94
Augusta, Me.,	3	358	617	180	29.17	50.28
Totals,	118	9,860	18,756	5,933	31.63	60.17

The whole number of *recent cases* admitted was 9,860; the whole number of recoveries, as before stated, 5,933; and the percentage of *all recoveries* upon the number of *recent cases* admitted, 60.17. Here, then, by setting aside and disregarding the 8,896 cases of more than 12 months' duration, we have succeeded in raising the recoveries to a point above 50 per cent.

By the union into one group, so far as they are susceptible of such union, of the contents of these two tables, we obtain the following aggregate results.

In 39 American hospitals, during a period of from 3 to 6 years each, making an aggregate of 186 years of hospital work, the number of patients admitted was

and the least, 33.67 per cent, at Harrisburgh. Of the remaining thirteen hospitals, the proportion is less than 40 per cent at one; between 40 and 45 per cent, at four; between 45 and 50 per cent, at five; between 50 and 55 per cent, at two; and over 55 (56.34) per cent, at one. Thus, after aiding and assisting the recoveries of recent cases by a supplementary and a complimentary gift of the certainly not despicable number of 668 cases, we have been unable to swell them even to 50 per cent of the admissions of recent cases.

We now come to the hospitals which give the duration of the disease in the cases admitted, but give no such information in respect to the cases discharged. The following table includes the statistics, for a term of from two to six years each, of twenty-four institutions of this class. Of six of them—Jacksonville, Ill., Mt. Pleasant, Iowa, Fulton, Mo., St. Joseph, Mo., Lincoln, Neb., and Jackson, La.—the term was six years; of eleven—Hartford Retreat, Ct., Middletown, Ct., Middletown, N. Y., Trenton, N. J., Danville, Pa., Williamsburg, Va., Richmond, Va., U. S. Government Hospital, Washington, D. C., Jackson, Miss., Cleveland, Ohio, and Longview, Ohio,—five years; of six—Brattleboro, Vt., Staunton, Va., Weston, W. Va., Pontiac, Mich., Madison, Wis., and St. Peter, Minn.,—four years; and at one—Augusta, Me.,—three years.

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TABLE V. RECOVERIES AT TWENTY-FOUR AMERICAN INSTITUTIONS.

HOSPITALS.	ADMISSIONS.			DISCHARGES.		
	Years.	Under 12 months' duration.	Total Admissions.	Total Recoveries.	Per cent of recoveries on all Admissions	Per cent of all recoveries on admissions of less than 12 months' duration.
Jacksonville, Ill., . . .	6	1,000	1,605	440	27.41	44.00
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Jackson, La.,	6	83	231	63	27.27	75.00
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Middletown, N. Y., . .	5	503	775	300	38.71	59.64
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Danville, Pa.,	5	263	695	110	15.83	41.83
Williamsburg, Va., . .	5	165	380	171	45.00	104.00
Richmond, Va.,	5	357	559	254	45.44	71.15
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Jackson, Miss.,	5	235	526	228	43.35	97.02
Cleveland, O.,	5	681	1,135	414	36.48	60.79
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Brattleboro, Vt., . . .	4	199	344	88	25.58	44.22
Stanton, Va.,	4	207	467	201	43.04	97.10
Weston, W. Va.,	4	136	328	104	31.71	76.47
Pontiac, Mich.,	4	320	707	145	20.51	45.31
Madison, Wis.,	4	307	746	163	21.85	53.09
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The whole number of *recent cases* admitted was 9,860; the whole number of recoveries, as before stated, 5,933; and the percentage of *all recoveries* upon the number of *recent cases* admitted, 60.17. Here, then, by setting aside and disregarding the 8,896 cases of more than 12 months' duration, we have succeeded in raising the recoveries to a point above 50 per cent.

By the union into one group, so far as they are susceptible of such union, of the contents of these two tables, we obtain the following aggregate results.

In 39 American hospitals, during a period of from 3 to 6 years each, making an aggregate of 186 years of hospital work, the number of patients admitted was

33,318; the number of patients discharged recovered, 9,713; and the proportion of recoveries, as compared with admissions, 29.15 per cent. In the factors producing this result it will be observed that all the cases of duplicate, triplicate and manifold recoveries of one and the same person, are included, and yet the recoveries do not rise to 30 per cent.

The whole number of *recent* cases admitted was 17,923; the total recoveries of both recent and chronic cases, as already mentioned, 9,713; and the proportion of *all recoveries*, as compared with the admissions of *recent cases*, 54.19 per cent. But be it not forgotten that this result is obtained by the sacrifice, or annulment, of *fifteen thousand three hundred and ninety-five (15,395) admissions*, or, in other words, by calculating the proportion of recoveries upon a little more than one-half of the number of admissions.

RECOVERIES AT TWENTY AMERICAN HOSPITALS; THIRD
TERM OF FIVE YEARS.

It will, perhaps, be remembered that my monograph on the Curability of Insanity, which was prepared in 1876, contained a list of twenty institutions for the insane, so tabulated with their statistics as to show the proportion of recoveries at each of two quinquennial periods,—the first of those periods being the second quinquennium of the existence of those hospitals, respectively, and the last period being the quinquennium terminating in either 1876, or one of the two immediately preceding years. The longest time wholly intervening between those two quinquennia was 44 years, at the McLean Asylum, Mass; the shortest, 2 years, at the Mendota Hospital, Wisconsin; and the mean or average time, eighteen and one-half years. But the true mean time, as applied to the gathering of

the statistics—that is, the time from the middle of the first quinquennium to the middle of the last—was five years longer, or twenty-three and one-half years.

The total of admissions in the first period was 14,516; the total recoveries, 6,689; and the proportion of recoveries on admissions, 46.08 per cent. The admissions of the second period were 24,383; the recoveries, 8,354; and the proportion of recoveries, 34.26 per cent, or a fall of 11.82 in that proportion. This diminution equalled one fourth, or, to be exact, 25.66 per cent, of the recoveries of the first period.

As eight years have elapsed since the close of the second period, it has appeared to me that some similar researches, at a still later date, might tend more fully to illustrate the subject of curability, and perhaps secondarily, or indirectly, the general character of the disease. Accordingly, I have collected the statistics of admissions and recoveries at the same twenty institutions during a third period of five years, that period terminating, at nineteen of them, in or with 1884, and at one where the reports are biennial, in or with 1883. At two of the institutions, both of which issue biennial reports, the duration of the period is six years. Those statistics, together with the results in each of the first two periods, are contained in Table VI.

The aggregate admissions in the course of this third period is 23,052; the aggregate recoveries, 6,896; and the proportion of recoveries, 29.91 per cent of the admissions, a result which demonstrates that the reported recoveries have continued to diminish, during the last eight years, in very nearly the same annual ratio as they had diminished between the first and the second period.

The following is a summary of the results of the whole investigation—

TABLE VI.
RECOVERIES AT TWENTY AMERICAN HOSPITALS; THIRD TERM OF FIVE YEARS.

INSTITUTIONS.	First Five Years.	Per cent of Recov's.	Second Five Years.	Per cent of Recov's.	Decrease of per cent of Recov's.	Third Five Years.	Total Admitted.	Total Recov'd.	Per cent of Recov's.	Per cent of Recoveries compared with that of Second Five Years.		Decrease of per cent of recoveries from first five years.
										Decr'se.	Incr'se.	
Augusta, Me.,.....	1846-50	48.55	1871-75	36.62	11.93	1880-84	1,008	296	29.36	7.26		19.19
Concord, N. H.,.....	1848-52	46.92	1872-76	32.97	13.95	1880-84	623	158	25.36	7.61		21.56
Brattleboro, Vt.,.....	1841-46	43.50	1871-76	30.43	13.07	1878-83	551	124	22.50	7.93		21.00
McLean, Mass.,.....	1823-27	40.69	1871-75	21.66	19.03	1880-84	421	123	29.22		7.56	11.47
Worcester, Mass.,.....	1839-43	48.59	1871-75	29.75	18.84	1880-84	1,319	264	20.01	9.74		28.58
Taunton, Mass.,.....	1859-63	43.46	1871-75	23.11	20.35	1880-84	1,318	296	22.46	.65		21.00
Butler Hospital,.....	1854-58	39.78	1872-76	35.57	4.21	1880-84	4655	194	30.55	5.02		9.23
Hartford Retreat,.....	1829-33	57.40	1870-74	39.21	18.19	1880-84	453	162	35.76	3.45		21.64
Bloomington, N. Y.,.....	1826-30	47.55	1871-75	32.55	15.00	1880-84	626	200	31.95	.60		15.60
Utica, N. Y.,.....	1848-52	43.17	1871-75	32.33	10.84	1880-84	2,020	610	30.20	2.13		12.97
Flatbush, N. Y.,.....	1861-65	41.88	1871-75	33.11	8.77	1880-84	2,071	336	16.22	16.89		25.66
Trenton, N. J.,.....	1853-57	42.79	1872-76	31.32	11.47	1880-84	836	251	30.02	1.30		12.77
Pennsylvania Hospital, ..	1846-50	51.10	1871-75	42.30	8.80	1880-84	973	328	33.71	8.59		17.39
Dixmont, Pa.,.....	1861-65	37.78	1871-75	30.01	7.77	1880-84	908	216	22.31	7.70		15.47
Catonville, Md.,.....	1839-43	51.59	1871-75	40.83	10.76	1880-84	656	249	31.86	8.97		19.73
Newburgh, O.,.....	1860-64	46.63	1871-75	30.03	16.60	1880-84	1,147	439	38.27		8.24	8.36
Dayton, O.,.....	1860-64	60.16	1870-74	45.25	14.91	1880-84	910	337	37.03	8.22		23.13
Indianapolis, Ind.,.....	1853-57	57.26	1871-76	52.48	4.78	1880-84	4,010	1,678	41.84	10.64		15.42
Jacksonville, Ill.,.....	1855-60	46.53	1869-74	31.96	14.57	1879-84	1,486	395	26.58	5.38		19.95
Mendota, Wis.,.....	1865-69	33.82	1871-75	25.86	7.96	1880-84	1,021	280	27.42		1.56	6.40
Totals and mean per cent.		46.08		34.26	11.82		23,052	6,896	29.91	4.35		16.17

Recoveries in the 1st period, 46.08 per cent of the admissions.

Recoveries in the 2d period, 34.26 per cent of the admissions.

Recoveries in the 3d period, 29.91 per cent of the admissions.

Decrease of recoveries from 1st to 2d periods, 11.82 per cent of the admissions.

Decrease of recoveries from 2d to 3d period, 4.35 per cent of the admissions.

Total decrease of recoveries from 1st to 3d period, 16.17 per cent of the admissions.

The decrease of recoveries from 1st to 2d period, is 25.66 per cent of the recoveries of the first period.

The decrease of recoveries from 2d to 3d period, is 12.69 per cent of the recoveries of the second period.

The total decrease from the recoveries of the first period is equal to 35.09 per cent of the recoveries of the first period.

The numbers of the insane subjected to treatment being hypothetically the same at the three periods, then, for each hundred (100) that recovered in the first period only seventy-four (74.34) recovered in the second period, and only sixty-five (64.91) recover now.

The proportion of recoveries between the last two periods, from 1879 to 1884, did not diminish at all of the twenty institutions. At three of them it increased. At the McLean Asylum this increase was 7.56 per cent of the admissions; at the Newburg, Ohio, hospital, it was 8.24 per cent; and at the Mendota, Wisconsin, hospital, 1.56 per cent. But notwithstanding this augmentation, the actual decrease from the proportion recovered in the first period, at those three institutions, is still 11.47, 8.36, and 6.40 per cent, respectively.

The decrease from the second to the third period,

and the total decrease from the first to the third period, at each of the seventeen other institutions, may be learned from the last two columns of the table. The decrease is more than one-half at the Worcester and the Flatbush hospitals; very nearly one-half at Brattleboro and Taunton; and more than one-third at Augusta, Concord, Hartford, Pennsylvania Hospital, Dixmont, Catonsville, Dayton and Jacksonville.

STATISTICS OF ONE YEAR, AT FIFTY-EIGHT AMERICAN
INSTITUTIONS.

For the purpose of ascertaining the extent to which the results of one year of the current work at American institutions would enlighten us upon the subject of curability, I have collected and herewith present, in Table VII, the statistics of fifty-eight of them, taken, in fifty-one instances, from the reports for 1884. Of seven of the hospitals the reports are biennial, and consequently contain the results for two years each. In four instances the report from which these results were taken ended in 1884; in one instance in 1883, and in two in 1882.

I am well aware of the many influences, both favorable and unfavorable, which may, and often do, modify the number of recoveries, as well as of deaths, in public institutions, and which necessarily render the results of any one year unreliable as a test or measure of the work of a series of years, at any individual hospital. But at a large number of institutions on any given year, these influences would probably very nearly balance one another, and consequently the aggregate results would fairly represent the mean or average of the same group of institutions for a much greater length of time.

TABLE VII. ONE YEAR AT FIFTY-EIGHT AMERICAN INSTITUTIONS.

Institution.	State.	Year.	Admitted.	Recovered.	Per cent of Recoveries.	Died.	Per cent of Deaths.
Augusta,	Me.	1884	203	59	29.06	101	49.75
Concord,	N. H.	1884	141	18	12.77	24	17.02
Brattleboro, . . .	Vt.	1884	82	23	28.05	29	35.36
McLean,	Mass.	1884	113	34	30.09	17	15.04
Worcester,	Mass.	1884	252	53	21.03	57	22.62
Northampton, . .	Mass.	1884	136	25	18.38	25	18.38
Taunton,	Mass.	1884	283	85	30.04	65	22.97
Danvers,	Mass.	1884	530	96	18.11	101	19.06
Boston, City, . . .	Mass.	1884	121	34	28.10	32	26.45
Butler,	R. I.	1884	106	46	43.40	13	12.26
Hartford Retr't	Ct.	1884	97	37	38.14	18	18.56
Middletown, . . .	Ct.	1884	271	72	26.57	80	29.52
Bloomington, . . .	N. Y.	1884	136	55	40.44	27	19.85
Flatbush,	N. Y.	1884	479	47	9.81	101	21.09
Utica,	N. Y.	1884	372 ⁺	89	23.92	56	15.05
Buffalo,	N. Y.	1884	275	80	29.09	43	15.63
Trenton,	N. J.	1884	175	52	29.71	64	36.57
Morristown,	N. J.	1884	210	37	17.62	57	27.14
Penna. Hos., . . .	Pa.	1884	203	51	25.12	49	19.70
Harrisburg,	Pa.	1884	128	23	17.97	36	28.12
Dixmont,	Pa.	1884	189	28	14.81	69	36.50
Danville,	Pa.	1884	201	37	18.41	29	14.42
Norristown,	Pa.	1884	356	92	25.84	96	26.96
Warren,	Pa.	1884	203	36	17.73	46	22.66
Catonsville,	Md.	1884	95	29	30.53	30	31.57
Mount Hope, . . .	Md.	1884	169	77	45.56	45	26.62
Washington,	D. C.	1884	347	79	22.77	67	19.30
Staunton,	Va.	1884	133	55	41.35	36	27.06
Richmond,	Va.	1884	119	97	81.51	61	51.26
Weston,	W. Va.	1884	176	74	42.05	39	22.15
Raleigh,	N. C.	1884	106	26	24.53	11	10.37
Goldsboro,	N. C.	1884	81	26	32.10	14	17.28
Morganton,	N. C.	1884	71	31	43.66	9	12.67
Columbia,	S. C.	1884	293	72	24.57	143	48.80
Austin,	Texas.	1884	254	66	25.98	41	16.14
Little Rock,	Ark's.	1884	82	42	51.22	21	25.61
Nashville,	Tenn.*	1882-84	222	67	30.18	62	27.93
Columbus,	Ohio.	1884	282	164	58.16	59	20.92
Newburgh,	Ohio.	1884	220	87	39.55	37	16.81
Dayton,	Ohio.	1884	188	60	31.91	37	19.68
Athens,	Ohio.	1884	223	96	43.05	63	28.25
Longview,	Ohio.	1884	220	56	25.45	58	26.36
Indianapolis, . . .	Ind.	1884	908	329	36.23	113	12.33
Pontiac,	Mich.	1884	192	62	32.29	29	15.10
Kalamazoo,	Mich.	1884	174	17	9.77	9	5.17
Jacksonville, . . .	Ill.	1884	240	56	23.33	32	13.33
Elgin,	Ill.	1884	123	38	30.89	21	17.07
Anna,	Ill.	1884	220	67	30.45	33	15.00
Kankakee,	Ill.	1884	291	48	16.49	31	10.65
Mendota,	Wis.	1884	239	58	24.27	30	12.55
Oshkosh,	Wis.*	1883-84	601	148	24.63	115	19.13
Mt. Pleasant, . . .	Iowa.*	1882-83	534	120	22.47	98	18.35
Independence, . . .	Iowa.	1883	233	38	16.31	34	14.59
St. Peter,	Minn.*	1883-84	595	143	24.03	82	13.78
Rochester,	Minn.*	1883-84	299	55	18.39	43	14.38
Fulton,	Mo.*	1881-82	364	175	48.08	113	31.04
St. Joseph,	Mo.*	1881-82	316	110	34.81	49	15.51
Napa,	Cal.	1884	500	130	26.00	90	18.00
Totals, and mean per cent,			14,372	4,007	27.88	2,980	20.74

* Biennial. ⁺ 15 cases "found not insane" are deducted.

The aggregate of patients admitted at these fifty-eight institutions, in the course of the time specified, is 14,372; the aggregate of recoveries, 4,007; and the proportion of recoveries, calculated upon the admissions, 27.88 per cent, or a trifle more than one-fourth. The least relative number of recoveries, 9.77 per cent, was at Kalamazoo; and the largest, 81.51 per cent at Richmond.

In the following schedule the hospitals are arranged in groups, according to the proportion of their recoveries, each group differing five per cent from the one above or below it.

Below 10 per cent,	Flatbush and Kalamazoo.
From 10 to 15 per cent,	Concord and Dixmont.
From 15 to 20 per cent,	Northampton, Danvers, Morristown, Harrisburg, Danyille, Warren, Kankakee, Independence and Rochester.
From 20 to 25 per cent,	Worcester, Utica, U. S. Gov't Hospital, Raleigh, Columbia, S. C., Jacksonville, Mendota, Oshkosh, Mt. Pleasant and St. Peter.
From 25 to 30 per cent,	Augusta, Brattleboro, Boston, Middletown, Ct., Buffalo, Trenton, Penna. Hospital, Norristown, Austin, Longview and Napa.
From 30 to 35 per cent,	McLean, Taunton, Catonsville, Goldsboro, Nash- ville, Dayton, Pontiac, Elgin, Anna and St. Joseph.
From 35 to 40 per cent,	Hartford Retreat, Newburg and Indianapolis.
From 40 to 45 per cent,	Butler, Bloomingdale, Staunton, Weston, Morgan- ton, and Athens.
From 45 to 50 per cent,	Mount Hope and Fulton.
From 50 to 55 per cent,	Little Rock.
From 55 to 60 per cent,	Columbus.
Over 60 per cent,	Richmond.

If there be no mistake in the record from the Virginia Central Asylum, at Richmond, that institution, so far as my knowledge extends, has exceeded every other of its kind, not in America alone but upon the whole surface of the earth, in the proportion of its recoveries. Forty years ago, it was doing well to report the recovery of eighty per cent of *recent* cases.

At the present time, it is rare that even sixty per cent are so reported, and the average in the United States, as we have just seen, is below forty per cent. But here we are confronted with a proportion of 81.51 per cent of *recoveries of all the cases admitted!* The moral to be derived herefrom appears to be, that, if any person yet unborn be blessed with the pre-natal power of foreordination of his own physical organization, and desire to recover in case he be afflicted with insanity, he should elect to be born a negro.*

There is yet another useful moral to be derived from the case. At the Danvers Hospital, which, before it went into operation, had cost more than \$3,500, for every patient for whom its accommodations were calculated, and more than \$2,500, for each of the seven hundred patients who have been crowded into it, the per cent of recoveries was 18.11. At the Richmond Hospital, which apparently could not have cost over \$100, and probably not more than \$50, per patient, the recoveries were equal to 81.51 per cent. The moral is so conspicuously obvious, that it would be a work of supererogation to repeat it.

In Table VIII, the fifty-eight hospitals and their statistics are grouped according to the States in which they are respectively situated.

The proportion of recoveries was the smallest in New Hampshire, and that proportion increased in the other States in the following order, Pennsylvania, Iowa, New York, Michigan, Minnesota, District of Columbia, Massachusetts, New Jersey, Illinois, Wisconsin, South Carolina, Texas, California, Vermont, Maine, Connecticut, Tennessee, North Carolina, Indiana, Maryland, Ohio, Missouri, West Virginia, Rhode Island, Arkansas and Virginia.

* The Virginia Central Asylum is for colored persons.

TABLE VIII. STATE GROUPS, ONE YEAR.

STATES.	No. of Hospitals.	Admissions	Recoveries.	Per cent of Recoveries.	Died.	Per cent of Deaths.
Maine	1	203	59	29.06	101	49.75
New Hampshire....	1	141	18	12.77	24	17.02
Vermont.....	1	82	23	28.05	29	35.36
Massachusetts.....	6	1,435	327	22.79	297	20.69
Rhode Island.....	1	106	46	43.40	13	12.26
Connecticut.....	2	368	109	29.62	98	26.63
New York.....	4	1,262	271	21.47	227	17.99
New Jersey.....	2	385	89	23.12	121	31.15
Pennsylvania.....	6	1,280	267	20.80	316	24.69
Maryland.....	2	264	106	40.15	75	28.41
District of Columbia	1	347	79	22.77	67	19.31
Virginia.....	2	252	152	60.31	97	38.49
West Virginia.....	1	176	74	42.05	39	22.15
North Carolina.....	3	258	83	32.17	34	13.18
South Carolina.....	1	293	72	24.57	143	48.80
Texas.....	1	254	66	25.98	41	16.14
Arkansas.....	1	82	42	51.22	21	25.61
Ohio.....	5	1,133	463	40.86	254	22.41
Michigan.....	2	366	79	21.58	38	10.38
Indiana.....	1	908	329	36.23	112	12.33
Illinois.....	4	874	209	23.91	117	13.38
Wisconsin.....	2	840	206	24.52	145	17.26
Iowa.....	2	767	158	20.60	132	17.21
Minnesota.....	2	894	198	22.14	125	13.98
Missouri.....	2	680	285	41.91	162	23.82
California.....	1	500	130	26.00	90	18.00
Tennessee.....	1	222	67	30.18	62	27.93
Totals, and Mean per cent	58	14,372	4,007	27.88	2,980	20.74

If the statistics of recoveries be arranged in accordance with the groups popularly called the Eastern, the Middle, the Southern, and the Western States, the results are as follows;—and to them are appended the percentage of deaths, calculated, like the recoveries, upon the number of patients admitted.

In the Eastern States the total of admissions was 2,335; the total of recoveries, 582; and the proportion of recoveries, 24.92 per cent. The number of deaths was 562, and the proportion, 24.07 per cent. The number of recoveries exceeded that of deaths by only 20.

In the Middle States the number of admissions was 2,927; the number of recoveries, 627; and the propor-

tion of recoveries, 21.42 per cent. There were 664 deaths, equal to a percentage of 22.69. The deaths have a majority of 37 over the recoveries; and the proportion of both recoveries and deaths is less than in the Eastern States. It has been suggested in one of the criticisms of a psychological periodical, that the small ratio of recoveries in Massachusetts is a consequence of the published writings of the superintendent of one of the hospitals in that State. As, according to these statistics, the proportion of recoveries is less in the Middle States than in Massachusetts, the proposition now is,—*Whose published writings were the cause of it?*

In the Southern States 1,844 patients were admitted; and 632, or 34.27 per cent, recovered. The total of deaths was 496, or 26.90 per cent. The proportion of recoveries is nearly ten per cent on the admissions in excess of those of the Eastern States; and that of deaths nearly three per cent. The proportion of recoveries is considerably increased by the statistics of the Richmond Asylum. If those statistics be set aside, and the computation made upon the returns from the other Southern institutions, the results are;—Admissions 1,725; recoveries 535; per cent of recoveries, 31.21. Deaths 435; percentage of deaths on admissions, 25.21.

In the Western States the admissions were 7,266; the recoveries, 2,166; and the proportion of them 29.81 per cent. Of deaths there were 1,258, or a proportion of 17.31 per cent, which is more than five per cent of the admissions less than in either of the other sections.

Arranged in accordance with the *increasing* ratio of recoveries, that is, from lowest to highest, the sections stand as follows;—Middle, Eastern, Western, Southern;—and in accordance with the *decreasing* ratio, from highest to lowest, of deaths, as follows; Southern, Eastern, Middle, Western.

TABLE VIII. STATE GROUPS, ONE YEAR.

STATES.	No. of Hospitals.	Admissions	Recoveries.	Per cent of Recoveries.	Died.	Per cent of Deaths.
Maine	1	203	59	29.06	101	49.75
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Arranged in accordance with the *increasing* ratio of recoveries, that is, from lowest to highest, the sections stand as follows;—Middle, Eastern, Western, Southern;—and in accordance with the *decreasing* ratio, from highest to lowest, of deaths, as follows; Southern, Eastern, Middle, Western.

These results are derived from the work of but a single year, and hence are unreliable as an established formula. By the extension of the investigation over a sufficient series of years, something more reliable might be obtained. Then, and not now, will be the time to speculate upon the causes of the differences.

STATISTICS OF PENNSYLVANIA HOSPITALS.

The table to which attention is now requested includes statistics of the seven hospitals in Pennsylvania, during a period of five years each, with the exception of that at Warren, which is of but four years. At all of them the period ended in, or with, the year 1884.

TABLE IX. PENNSYLVANIA HOSPITALS.

		Admitted.	Recovered.	Per cent of recoveries.	Died.	Per cent of Deaths.
Frankford	1880-84	196	58	29.59	39	19.90
Penna. Hospital	" "	973	328	33.74	147	15.11
Dixmont	" "	968	216	22.31	277	28.61
Harrisburg	" "	772	121	15.97	174	22.54
Danville	" "	720	114	15.83	118	16.39
Norristown	" "	1,458	275	18.86	290	19.89
Warren	1881-84	847	92	10.86	113	13.34
Totals and Mean per cent		5,934	1,204	20.29	1,158	19.51

The whole number of cases admitted was 5,934; the total of recoveries, 1,204; and the proportion of recoveries 20.29 per cent. But Norristown and Warren are both new hospitals, and in their first years received many transfers from other institutions. Hence they are unfairly represented. We will therefore permit the statistics of only the last two years at these institutions to enter into the computation, retaining, for the others, the full period of five years. Those statistics are as follows.

		Admitted.	Recovered.	Per cent of recoveries.	Died.	Per cent of Deaths.
Norristown....	1883-1884	777	195	25.09	219	28.18
Warren	1883-1884	388	70	18.04	80	20.62
Totals and Me'n per cent.....		4,794	1,102	22.98	1,054	21.98

By a substitution of these figures for those contained in the next preceding table, it will be found that the whole number of admissions is 4,794; the number of recoveries, 1,102; and the proportion of recoveries, 22.98 per cent, or a gain of 2.69 per cent on the admissions, by the change.

At the four State Hospitals of Massachusetts, the proportion of recoveries in the three fiscal years ending in 1882, and the statistics of which form the basis of an article on curability in the Northampton, Mass. report for that year, was 22.25 per cent. This is seventy-three hundredths (.73) of one per cent less than that of the Pennsylvania hospitals, according to these statistics. But this difference is more than counter-balanced by the fact that the Massachusetts statistics relate to *persons* only, while those of Pennsylvania relate to *cases*. In the latter all duplicate, triplicate and multiplicate recoveries are included, while in the former they are all *rejected*.

By the first of the two tables the deaths were 1,158, and their proportion on the admissions, 19.51 per cent. By the last table they were 1,054, and their proportion, 21.98 per cent, or an increase of 2.47 per cent. This increase is a natural result, as deaths are generally comparatively few in the first two or three years of a hospital's operations.

TESTIMONY OF THE DANVERS HOSPITAL.

The experience at the newest State institution in Massachusetts is both instructive and disappointingly

interesting, in the light which it throws upon the curable, or rather the incurable, condition of a great mass of the insane of the present epoch in that State.

The Danvers Hospital was opened for the reception of patients on the 18th of May, 1878. It is, emphatically, one of those establishments upon which a flood of money has been poured, for the purpose of creating a curative institution as nearly perfect as possible under the light of existing knowledge. If abundance of pecuniary means in construction, together with what was believed to be the highest embodied ideal of architectural arrangements, could cure insanity more rapidly than a less costly and more simple structure, that hospital, most assuredly, was prepared for a demonstration of the proposition. It was evident that great efforts were made to arrive at such a demonstration, and thus prove that the curative advantages of the institution were an adequate, or—since the value of reason restored is not to be measured by dollars and cents—*more* than adequate compensation for the excess of expenditure. The usual custom of a large transfer of chronic and incurable cases from older hospitals or asylums to the new one, was here omitted, and the supply of patients was derived chiefly from current commitments. By this means the proportion of recent cases was much higher than usual from the first; and as Boston and five other large centres of population—which usually furnish a larger ratio of recent cases than the rural districts—are within a comparatively short distance from it, that proportion was raised still higher.

The fiscal year of the State institutions terminated four and one-half months after the hospital was opened. During this period 305 patients were admitted; and 26, or 8.82 per cent, discharged recovered. In the

course of the next—1878-79—fiscal year, 653 were admitted; and 115, or 17.61 per cent, discharged recovered. In 1879-80 the admissions were 581, and the discharge of recoveries 165, making the percentage of the latter 28.40. At this point the proportion of recoveries stopped upon its ascending scale, and took a retrograde direction. In 1880-81 the admissions were 497, the recoveries discharged, 124, and the percentage, 24.95; in 1881-82, admissions 512, discharged recoveries 89, percentage 17.38; in 1882-83, admissions 488, discharged recoveries 80, percentage 16.39; and in 1883-84, admissions 530, discharged recoveries 96, and the percentage of the latter 18.11.

The whole number of admissions, during the six years and four and one-half months, was 3,566; and that of discharged recoveries 695, or an equivalent of 19.49 per cent. In the first three full fiscal years, the admissions were 1,731, the discharged recoveries, 404, and the per cent of the latter 23.34; and in the last three fiscal years, admissions 1,530, discharged recoveries 265, per cent of recoveries 17.32. In the first period of three years, the deaths were 240, or 13.86 per cent of the admissions; and in the last period, 285, or 18.63 per cent of the admissions. In the first period the deaths were 240, a per cent of 59.4 on the recoveries; and in the last period, they exceeded the recoveries by 20, the deaths being to the recoveries as 57 to 53.

The new formulæ for statistics in Massachusetts give the ability still further to illustrate the character of the recoveries,—an ability rendered by the reports of no other State in the Union. The new tables were adopted in 1879, and first used in the reports for 1879-80. In the course of the five fiscal years ending September 30, 1884, 554 patients, or *cases*, were discharged recovered from the Danvers Hospital; but

115 *persons*, who had been discharged recovered a total of 121 *times*, had returned to it. Within the last three years,—which are included in the foregoing years—the discharged recoveries were 265; but, during the same time, 80 *persons*, representing 86 of those recoveries, were readmitted. So far as the community is concerned, these recoveries offset, or cancel, the same number of the discharged recoveries, and the added recoveries in the population, instead of being 265, is 265 minus 86, or 179, a diminution of about one-third, and only 11.70 per cent on the number of admissions during that period.

RE-ADMITTED RECOVERIES IN MASSACHUSETTS.

The annual report for 1881–82 of the Northampton Lunatic Hospital, contains an article on the statistics of the State Hospitals of Massachusetts during the three years which had then elapsed since the adoption of the new series of tables. I desire to call attention to some points in the statistical history of recoveries, as illustrated by the same hospitals, during the two years since that article was published. For this purpose a table is here introduced which shows, for the fiscal years 1882–83 and 1883–84:

- 1st. The number of persons admitted who had previously been discharged recovered;
- 2d. The number of times they had previously recovered;
- 3d. The ratio of recoveries to persons; and
- 4th. The number of persons discharged recovered during those two years, at each of the four hospitals aforesaid.

TABLE X. TWO YEARS AT MASSACHUSETTS HOSPITALS.

HOSPITALS.	ADMISSIONS.			DISCHARGES.
	Persons admitted who had previously been discharged recovered.	No. of times they had recovered.	Ratio of recoveries to persons.	Persons discharged recovered.
Worcester.....	43	118	2.73	109
Taunton.....	64	147	2.29	145
Northampton.....	21	39	1.85	53
Danvers.....	49	54	1.1	176
Totals.....	177	358	2.02	483

The number of persons admitted who had previously been discharged recovered, was 177; and they had been discharged recovered a total of 358 times. There were 181 more recoveries than persons. In other words, the number of recoveries was four more than twice as great as the number of persons. Each person had recovered, as a mean or average number, 2.02 times. Regarded, during the last two years, from a debt and credit point of view, those four institutions cancelled, by taking back from the general population, no less than 358 recoveries for which they had been credited. During the same time they discharged, recovered, 483 persons, which is only 125 more than the *recoveries*, (not persons) which they had taken back.

Summary. A brief résumé of the most important results of the foregoing studies, expressed in the percentages of recoveries, may be found convenient for reference.

1. *Cases of first attack ; duration less than three months.*

- a. Earle's 8,316 cases, at 23 British Asylums. Recoveries 48.71 per cent.
- b. Chapman's 38,283 cases, at 46 British Asylums. Recoveries 48.72 per cent.

2. *Cases of first attack ; duration less than twelve months.*

- a. Earle's 10,929 cases, at 23 British Asylums Recoveries 44.06 per cent.

b. Chapman's 50,409 cases, at 46 British Asylums. Recoveries 43.79 per cent.

3. Not first attack; duration less than twelve months.

a. Earle's 4,768 cases, at 23 British Asylums. Recoveries 55.37 per cent.

b. Chapman's 19,574 cases, at 46 British Asylums. Recoveries 53.61 per cent.

In neither of the three foregoing classes have we any American statistics, because our institutions, in the tabulation of their cases, make no discrimination which would render such a classification possible.

4. All cases of duration less than twelve months.

a. Earle's 15,697 cases, at 23 British Asylums. Recoveries 47.49 per cent.

b. Chapman's 69,983 cases, at 46 British Asylums. Recoveries 46.52 per cent.

c. Earle's 8,063 cases, at 15 American Institutions. Recoveries 38.59 per cent.

5. All recoveries, calculated on all admissions.

a. Chapman's 93,443 cases, at 46 British Asylums. Recoveries 37.95 per cent.

b. Earle's 33,318 cases, at 39 [15+24] American Institutions. Recoveries 29.15 per cent.

c. Earle's 23,052 cases; 3d period at 20 American Institutions. Recoveries 29.91 per cent.

d. Earle's 14,372 cases; in one year at 58 American Institutions. Recoveries 27.88 per cent.

It will be perceived that, so far as these statistics are an index, the recoveries in British Asylums, both of recent cases and of all cases admitted, exceed the recoveries in the American institutions by between 8 and 9 per cent.

The most important general conclusions to be derived from the statistics included in this paper, are, first, that the old claim of curability in a very large majority of

recent cases is not sustained, and that the failure to sustain it is more apparent and more striking than at any antecedent time; and, secondly, that the percentage of reported recoveries of all cases received at the hospitals in this country still continues to diminish.

It is believed that this diminution is, in part, to be attributed to the admission of a larger proportion of chronic cases, and of cases of greater degeneracy from their origin; in part, from the increasing though, as there is good reason to believe, still far from universal practice of not reporting, *as recoveries from insanity*, either mere restorations from a drunken debauch, or forced temporary suspensions from habitual intoxication; and, in part, perhaps, from the adoption of a higher degree of improvement as the standard or criterion of recovery. It may be that there is still another cause of that diminution. Drs. Bucknill and Tuke, in their treatise upon insanity, mention what they call "cooked" statistics. It is possible that, in the United States, this class of published results is decreasing, and that the reported statistics are more generally given to the public in the spirit of a conscientious loyalty to scientific truth.

In conclusion I would express the hope, that the time is not far distant at which the American Association of Superintendents will so perfect its statistical system as to make a distinction between persons and cases; and enable the reader to learn how many of the reported recoveries are first recoveries and how many subsequent to the first. This improvement was made in the Massachusetts statistical tables, as already mentioned, in 1879; and in those of the British Medico-Psychological Association in 1883. Surely our Association ought not to lag far behind in the matter.

NEW WINE IN OLD BOTTLES.*

BY ORPHEUS EVERTS, M. D.,
Medical Superintendent of the Cincinnati Sanitarium.

When we consider the unnumbered ages through which successive generations of pre-historic men evidently wandered—naked, savage, cityless—poverty-stricken by inheritance, and accumulating knowledges, but slowly, before they became capable of memorizing the existence of the race; or the thousands of years since, through which we can trace their progressions by their foot-prints, and measure, somewhat accurately, the velocity of their movements; we may, indeed, realize the vanity of personal ambition, and the triviality of individual accomplishment; but we should not, therefore, be deterred from continuous and unflinching exertion in our efforts to increase, diffuse, and perpetuate, useful knowledges. It is hopeful, and probable, too, that by such efforts the ratio of human progression has been, and may be, increased; and that no contribution, however slight, to the momentum of the advancing races is, or ever will be, unobserved, or lost.

What then can we, who are supposed to be interested, especially, in the sciences of psychology and psychiatry, do to promote their growth, in the interest of human progress?

If "Science" implies "Knowledge duly arranged and referred to general truth, and principles on which it is founded"—whatever tends to such an arrangement of knowledge, of any given character, must be promotive of its growth as science.

* Read before the Association of Medical Superintendents of American Institutions for the Insane, at Saratoga, June 18, 1885.

As a slight contribution to the science of psychology, that is to be, it has occurred to me that some suggestions respecting the relation of words to ideas, and the necessity of definite expression for the communication of definite ideas, essential to harmonization of truths, from which, as a foundation, principles may be derived and science promoted, might not be unprofitable at this time, however doubtfully received.

That communicability of the higher and more complex states of brain-consciousness—or human consciousness—called ideas, and constituting knowledges, is essential to intellectual growth, may be known from the fact, everywhere observable, that through the entire range of conscious beings there is a well-established correspondence of capabilities of expression, or communicating states of consciousness, to intellectual capabilities, and the acquisition of knowledges: the difference between higher and lower orders of men, as well as between men and lower animals, being everywhere conspicuous because of such correspondence. It is, also, apparent that there could be no perpetuation of ideas beyond individual existence—hence no accumulation of knowledge—without this possibility of communication.

That accuracy of communication of states of consciousness, constituting ideas and knowledges, is essential to the development of science may be known from the fact that only by such accuracy can knowledge be so arranged, and referred to truths and principles, as to constitute science.

An ambiguous use of words and phrases can not be otherwise than misleading—tending to confusion—and to state unities in terms of difference must inevitably beget antagonisms of inference, without justification by truths.

That there ever has been, and must be, evolutions of language corresponding to successive evolutions of ideas and knowledges, need not be more than asserted. That modifications of ideas can only be effected, so as to become general, by modifications of language, belongs to the same category of facts and inferences.

Respecting the sciences of psychology and psychiatry, or the knowledges out of which sciences may be constructed, it is known to us all, that they are now, and have of late been, undergoing important modifications. It may be said indeed of most of persons now interested in these subjects, that their states of consciousness respecting the facts, phenomena, and inferences pertaining to them, are in a transitional condition.

For example: It has been taught heretofore, and still is, by the schoolmen of all civilized countries—and generally accepted as true: that all manifestations of consciousness, intelligence and power, by human beings, are effected by, and proceed from, certain supersensuous, hence hypothetical, entities, that are supposed to attach themselves in some mysterious way to, and dwell for a time within, such human beings, without becoming incorporate integers thereof.

But, notwithstanding such teaching was, and is, in accordance with the appearances of all facts and phenomena relating thereto, as seen upon the plane of intellectual recognitions hitherto attained, and still occupied by the greater number of living men—and the invariable practice of mankind in all ages, and stages of development, of ascribing all natural phenomena, not otherwise explicable by human capabilities and knowledges, to superhuman, or supernatural, hence hypothetical beings, endowed with intelligence and power equal to the necessity implied—now many individuals, if not schools, devoted to the

cultivation of science, and the development of the race, have reached a plane of recognitions, from which such supernatural, hypothetical beings—together with the necessities from which they had birth—are fast disappearing; lifted like morning mists from an ever-widening horizon—and dispelled, by the rising sun of science.

According to modern recognitions all so-called psychical phenomena—sensation, perception, memory, imagination, ratiocination—are but natural manifestations of variously complicated states of consciousness incidental and peculiar to material mechanisms, called brains.

These states of consciousness seem to be, and so far as facts justify belief, are, functional responses to organic necessities; essential, first, to the preservation of individual existence—manifested as hunger for food: and second, to the preservation of the species—manifested as sexual appetites; which constitute the primary fundamental states of consciousness, common to all conscious beings—evolutions from which—growths—or expansions—constitute the entire range of subsequent states—corresponding from first to last, to evolutions of capability relating to these two great ends of organization.

But presuming that all advanced students who have adopted a physiological basis for psychological observation, to be familiar with such modern recognitions—having learned to distinguish the phenomenal in nature from the actual or material—and to associate thought with that which thinks, as they associate light with materials and conditions invariably essential and antecedent: presuming, also, that they are familiar with the entire range of relations of language to ideas, and the necessity of words for the preservation of knowledges—attention may be directed at once to the necessity

and difficulty of so adapting old words to the forms of new ideas, as to give them fitting presentation, and distinguishment, whereby modern recognitions of truths may become definite and perspicuous. That one interested in the subject can not now open a book or periodical of late date, in which psychological matters are discussed, without being confused by, or under the necessity of translating, words and phrases used to communicate ideas at variance with the old and true intent of such words, justifies this call.

For example: Many, if not all, of our best writers in psychology and psychiatry, by their use of old words and phrases, would still seem to represent mind as a function-performing entity—if not a loose organization of entities, capable of performing independent functions—superior to, if not regardless of material mechanisms and conditions. Thus: (I read from an article in a late number of a notable journal of psychology and psychiatry, by a reputable and well-known author, entitled to and receiving our highest consideration of respect) as follows: "But while careful attention must be given to the physical condition (of the insane) so as to restore the whole nervous system to a healthy action, it must not be forgotten that *the mind* must also be occupied, or diverted from *its* morbid ideas."

In the same article the author speaks of making "a direct appeal to *the mind* through the sense of vision"—and of means whereby "an avenue may be opened (*to the mind*) for the entrance of other and different thoughts;—and of "infusing into *the mind* some idea or impression which may change the whole course of *the mind* from a downward to an upward direction,"—and of "dull and stupid children whose *minds* seem unable to take up and retain," &c., &c.—and of "giving employment to the thoughts and emotions," &c., &c.

Now, all of this, and the like, if read from the old metaphysical platform—or by one who can still look on a man as Dr. Clouston says the medical psychologist can not—as “A Mind or A Soul with a troublesome body attached,” is in good form, and well adapted to the end of perpetuating ideas, and concepts, that modern science discredits as superstition, or survivals of error pertaining to lower planes of recognition, and mythopoeic conditions of human capabilities and knowledge.

But for purposes of promulgating modern recognitions of truth, and promoting the growth of science, and human capabilities, it is open to serious criticism.

What does it signify literally, if not that Mind, instead of being an aggregation of phenomena inevitably sequential to certain antecedent conditions independent of which it has no tangible or knowable existence, is, itself, substantive and nominative—capable of being, doing, and suffering? Is not only itself but the sufficient cause of itself, not only thought, but that which thinks?

Another ambitious and prolific contributor to the periodical literature of psychology and psychiatry in this country in a recent publication uses the following forms of language:

“The emotions and the intellect are not twin-born, though they mutually influence each other. They do not always go hand in hand, nor dwell harmoniously together (mark the words) *in the brain*. In good cerebral organization they are often at war with each other.”

What, we may well ask, is the true intent and meaning of such diction, if it be not to teach the old doctrine or assert as a fact that there are such objective beings as “The Emotions,” and “The Will,”

that after birth (from what parentage?) are no longer phenomenal—but capable of performing functions—and from their respective dwellings in the brain, issue forth, like feudal barons of the olden time, to carry on warfare with each other?

Query: Is "The Will" thus constituted capable of manifesting emotions? Or can The Emotions carry on warfare with "The Will" without any will of their own? If the so-called "Will" is emotional, and "The Emotions" are wilful—how are they to be distinguished?

But this same zealous author says further: "Though insanity is marked generally by changes of character, that change is seldom manifested in augmenting the power of *The Intellect* and *The Will* over the emotions or passion, on the contrary the latter often subvert the former." Thus ascribing objective characteristics and functional capabilities to phenomena, or subjective manifestations of consciousness of which, as a matter of fact, brain mechanisms are alone capable. As well continue to speak of the pain of rheumatic joints—the heat of febrile conditions of the blood—the cough of tubercular lungs—as malignant supernatural entities doing the bidding of their master, the imputed arch enemy of mankind, as they were once believed to be—capable of "seizing," "attacking," shifting position at will, &c., as our language still indicates they were once supposed to do—thus causing "all the ills that flesh is heir to"—to be counteracted by counter assaults on the part of the physician with deadly drugs—and so purged out—puked out—burned out—drawn out in copious draughts of blood—as was once the custom—alas! not altogether now abandoned—as still to use such language in relation to modern psychological recognitions.

But the confusion which results from such use of words and phrases by an author who really recognizes mental phenomena as "inevitable sequences of antecedent conditions" of material mechanisms, finds fuller illustration in the following paragraphs; which though detached are not garbled, or perverted from their true purport.

"Metaphysical conceptions of mind"—says our author—"have long stood in the way of true progress in psychological knowledge. To this has been due the fact that physical disease, as a basis of all forms of mania, now a generally accepted truth, was so long controverted." "Momentary impulses and suggestions of a morbid kind obtrude themselves upon many healthy minds, like the vague feelings, of unreasonable unrest and depression which obtrude unbidden into the several chambers of the cerebral cortex."

Thus our author renounces and denounces "Metaphysical conceptions of Mind," and recognizes and approves such conceptions, in different paragraphs if not in a single paragraph, of the same article. But to pursue the subject further by way of illustration:

"Facts like these" says our author alluding to matters cited, "show the capabilities of the mental faculties" (meaning thereby, The Intellect—The Emotions—The Will, &c.,) to become partially involved in aberrant action without notable derangement of (What? Physical organs by physical disease? No!) the reason."

Again our author intent on denouncing "Metaphysical conceptions of Mind," says: "The Metaphysical conception of Mind—the abstraction made into an entity, as Maudsley justly observes, "has overridden discerning observation" in some quarters, and eminent and observing men have thus suffered their judgment

to become biased by the idea that the faculties (of what; the brain? No!) *the mind* can not act separately."

What do we mean by faculties? "Abilities to act or perform; capacity for any natural function." Can an abstraction—a phenomenon—perform natural functions, without first being transmuted into an entity? If the so-called "faculties of the mind" can not be made into entities, how can they act separately—or act at all?

But here we have the sum total of the author's philosophy, as well as an admirable illustration of the confusion into which the inconsiderate use of old words or phrases, in an attempt to express new ideas, involves him.

"Normal Mind," he says, "is the sum of the aggregate display of the cerebro-psyhic functions. Abnormal mind consists of such disorders of one or more of the cerebro-psyhic functions as to cause so marked a change in the psychical characteristics of the individual whether principally involving *the emotions*, the reasoning powers, or *the will*, as to make an inconsistency and inharmony in the person's character explicable only by disease."

Comment is needless. Illustrations of this kind are endless. If the subject is worthy of consideration enough has been said to attract attention to it.

It may be thought by the severely critical that such confusion of expression is indicative of confusion of ideas. I prefer to think otherwise, and attribute it to thoughtlessness of the relation of words to ideas, and long established habits of speech, and so call for reformation in the interest of science and the diffusion of correct as well as useful knowledge.

CLINICAL CASE.

RECOVERY AFTER LONG CONTINUED ARTIFICIAL RESPIRATION.

BY G. H. HILL, M. D.,

Superintendent of the Hospital for the Insane, Independence, Ia.

Alice H. W., 28 years old, married, two children.

Seven years ago, before marriage, was melancholy, but recovered at home in three months. Since the birth of her last child, ten months ago, has been more gloomy and depressed than natural; for four months has felt that her mind was breaking down; can not concentrate her attention on her work or reading. Has morbid impulses and fears she may kill herself or children. Thinks she never can get well, and will become a burden to her relatives. Nursed her baby until one week ago. She is thin and pale. Admitted to the Hospital for the Insane, at Independence, Ia., August 28, 1884.

Placed in best ward, ate and slept fairly, was quiet, conversed a little, wrote letters home, busied herself knitting for her children, revealed no insanity, except that she complained, when questioned, of confusion of mind and regarded her prospect as unfavorable. Had vulvitis, endocervicitis and retroflexion of the uterus for which she received local treatment.

Her husband assured me that she was entirely trustworthy, and urged that she be allowed as much outdoor exercise as possible. Besides daily walks and exercise on the croquet ground, she rode to town with an attendant one morning of the first and one of the second weeks she was at the hospital. When she had

been at the institution just three weeks, she was permitted, in company with another female patient, to visit town without being in charge of an attendant. At noon she failed to return to the hospital. I was told that she was at one of the hotels and too tired to ride back. I telephoned the landlord, who replied that she was asleep in the parlor and evidently had been taking ether. He was instructed to call a physician at once, and to give me the doctor's opinion, which was that the patient was dying from chloroform poisoning. When myself and assistant arrived where the patient was, we found her entirely unconscious, gasping spasmodically for breath once or twice a minute and completely relaxed and livid in appearance. This was at a quarter after one in the afternoon. Her pulse was 120, small but regular. Artificial respiration was begun at once in this manner: The patient's hands were drawn directly above the head as far as possible, then placed upon the epigastrium with firm pressure at the rate of twelve times per minute. These regular motions were continued for *eight hours*, when the patient returned to consciousness, and voluntary breathing was secured. If at any time during these eight hours artificial respiration had been stopped for five minutes, cyanosis and death would have been the immediate result. The following facts were finally determined:

After reaching town the patient bought at one of the drug stores, one ounce of chloroform and sixty grains of opium, neither the bottle containing the chloroform nor the pill-box containing the opium was labelled. She went directly to the parlor of the hotel, and about 10.30 A. M., swallowed 3vi of the chloroform and gr. xxx of the opium. Soon she became somewhat intoxicated, prayed that she might go to heaven, that her children might meet her there, &c. At noon

she vomited a little, then gradually fell into a profound sleep. Her pupils were not closely contracted and it was not known that she had taken opium until artificial respiration had been in progress two hours.

The following treatment was used: $\frac{1}{60}$ grain of atropia every two hours, hypodermically during the afternoon and evening, \mathfrak{v} of whisky hypodermically during the early part of the afternoon; once an hour afterward \mathfrak{v} of whisky and \mathfrak{v} of milk, were administered per rectum. During the night and the next day all nutriment and medicine were given per rectum, so as to avoid gastritis so far as possible, which we feared would be produced by the chloroform. From 9 P.M. until midnight, respiration was continued, slowly and irregularly by keeping the patient awake, and by urging her to fill the lungs. The last half of the night artificial respiration became necessary and was kept up most of the time. She was speedily restored from the effects of the chloroform and the opium. Two months afterward she was nearly recovered from her melancholy and is now quite well at home.

ABSTRACTS AND EXTRACTS.

SPONTANEOUS RUPTURE OF THE HEART.—A case of this character has recently occurred in the Gloucester County Asylum, which, from the description by Harding H. Tompkins, M. R. C. S., in the *British Medical Journal* (May 2, 1885), appears to have been strikingly similar to a case reported in the *AMERICAN JOURNAL OF INSANITY*, for January, 1885, and to three other cases referred to in that article. The patient, a widow, aged 63, was admitted to the asylum in 1881, in a state of acute melancholia. She was suicidal and at times dangerous to others. By 1883 she had become quiet during the day, but maniacal and very obscene by night, requiring twenty grains of chloral-hydrate each night. She was, however, in good health. Subsequently her bodily health gradually declined, until, by November, 1884, she had become very quiet and rather depressed. On January 7th, 1885, she complained of feeling weak and tired, and was therefore kept in bed, where she remained without any special symptom, taking her food as usual. She remained in bed until January 10th. On that day, a nurse who, on leaving her just before, had not noticed any change, on returning, a few minutes later, found her breathing heavily, ghastly pale, and apparently dying. When seen by Mr. Tompkins, two or three minutes later, she was unconscious, with eyes wide open and dilated pupils, the conjunctivæ being almost insensitive; she was cold and pulseless; neither could any sound be heard over the cardiac area. By the direction of Mr. Craddock, the medical superintendent, fifteen minims of hydrochloric ether were administered hypodermically, hot water bottles were placed round her, and a mustard-plaster applied to the chest, after which the pupils contracted somewhat, and the conjunctivæ regained their sensitiveness; she was also able to swallow a little brandy-and-water. Her pulse was now very feeble, rapid and irregular, numbering 180 beats to the minute. In a quarter of an hour the injection was repeated, but she gradually grew worse, and relapsed into a semi-comatose condition, dying suddenly one hour and a few minutes after the attack.

The post mortem examination was made forty-seven hours after death. The body was free from external marks of violence, but the skin throughout was of a peculiar white and waxlike appearance. The brain weighed fifty-one ounces and a half. The as-

ending parietal convolution on the left side was in a state of yellow softening, as also were the whole of the right occipital lobe, and about two-thirds of the left cerebellar, slender and inferior lobes. The arteries at the base were atheromatous and contained calcareous plates. The heart weighed twelve ounces and a half. On opening the pericardium a large dark clot was seen entirely hiding the heart; this proved to be six ounces and a half in weight. On removing the heart there was seen a jagged opening into the left ventricle, an inch and a quarter long, running at the posterior aspect parallel with the septum, and about midway between the base and the apex of the heart. On opening the heart, the internal opening was found to be hidden by the base of the musculus papillaris, which was ruptured, and the aperture was but little larger than would admit the head of a probe. The left ventricle was rather hypertrophied, and the whole substance of the heart was very fatty, the point of rupture appearing more particularly so and also being much thinned. A section through this opening showed the muscular fibres to be much torn up, and separated to a greater extent even than the external opening. All the valves were very atheromatous, except the pulmonary. Microscopic examination of a specimen taken from near the rupture showed little more than streaks of granules, the proper heart-structure being entirely hidden, or replaced by fat; here and there ill-defined muscular fibres could be seen, and these also were studded with the products of fatty degeneration.

Viewed in the light of the autopsy, it was thought probable that the collapse occurred upon rupture of the musculus papillaris, and that after this the heart partially regained its power, although the blood was gradually tearing up its structure, and forcing its way toward the pericardium; on rupturing which the pericardial cavity was suddenly filled, all action instantly ceased and the patient died. This explanation of the time the patient lived after the first symptoms was suggested by the condition of the heart-wall, the substance of which was much more extensively lacerated than was either the inner or the outer opening.

TREATMENT OF MANIACAL EXCITEMENT.—Dr. J. A. Campbell, Superintendent of the Counties Asylum, Carlisle, in a paper read at the last meeting of the British Medical Association, offered the following remarks and results of his experience in the treatment of maniacal excitement:

1. In the insanity of masturbation, I have used careful feeding, blood-restorers, out-door exercise, sleeping under supervision, in some cases circumcision, the morning shower-bath, and, if a sedative was really required, bromide of potassium, on account of its anaphrodisiac qualities. A large proportion of this class adhere to their habits, drift into dementia, and die of phthisis.

2. Puerperal mania. In the ten years ending 1884, forty cases, occurring within a few days of confinement, and exhibiting acute excitement, came under my care. All except four recovered—90 per cent. Of the four who did not recover, two remain in the asylum; two died, one while away convalescent on a month's trial, the other from phthisis, which she had in a far advanced state before confinement. I have found that by careful feeding, tonic treatment, and attention to the general health, with out-door exercise whenever the patient can bear it, the excitement speedily disappears, and the tendency of the disease is to recovery. I have never seen a patient die during an attack of puerperal mania, except from previously existing disease, or an acute disease occurring during the course of the attack.

3. In the recent cases we call acute mania, I do not enter on those cases of very short duration which we term ephemeral, which only last a few hours or a night, and where the recovery is as sudden and complete as the invasion was unlooked for and unheralded by any known train of symptoms. I take the class of cases we all recognise and see a large proportion of. I do not believe that at the stage excitement has reached when the patient comes under asylum treatment we can at once cut short the attack; though I do not see why, at an earlier stage, before the brain congestion has reached the point where an explosion of excitement takes place, treatment which would divert nerve action to other parts of the body, produce muscular action tending to exhaustion and predisposing to sleep, with suitable feeding and sleep-compelling medicine, should not entirely avert an attack of excitement. I believe treatment can shorten an attack of excitement in many cases. I am certain, also, that I have seen cases run a long course of excitement uninfluenced by such treatment as I could use, without feeling it might have an evil influence on recovery. I believe extreme purgation, the free use of tartar emetic, and the constant use of opium in large doses will subdue excitement, at least for the time. I have seen cases treated in this way. I do not use such treatment, as I am convinced it retards—probably prevents—recovery. During the two years ending 1884 I admitted fifty-

six patients of this class, twenty-eight of each sex. The average duration of excitement was fourteen days; in the males thirteen, and in the females sixteen days. Of this number two males remained excited for a month, and one for two months; while four females ran a long course of excitement, extending to five, six, eight, and ten weeks. These cases were specially treated with out-door exercise, and were carefully fed; kept out as long as they could stand exercise or the weather would allow. Sedatives were used merely to render the patients manageable in fourteen cases. Sleep-producers were given in six, and only where sleep did not in a night or two follow from the exercise. The subsidence of the excitement was carefully noted from the time at which the patient could be treated in an ordinary ward or sent to work, and was calm in demeanour and action. I know the great difficulty there is in estimating mental states, but I think all recognise acute mania, and know pretty well the state in which a patient is who is trusted without a special attendant to inhabit a well-furnished and decorated ward. During the period of excitement one, sometimes two, attendants were devoted to each patient. I most distinctly hold that acutely excited patients should be treated separately, away from other patients; and I am now certain that persistent muscular action in the open air is the safest, quickest, most effective, and most natural means of promoting recovery from the state known to us as acute mania. I of course include suitable and frequent feeding, the use of tonics and stimulants, and the ordinary warm bath. Were more time at my disposal, I could show that a course of acute excitement could be run, under judicious treatment, with very little loss of body weight and without utterly excessive feeding.

4. In insanity from drink, the excitement need not be of long duration. A considerable number of such cases come under my care, and I find a good purgative, plenty of liquid food, copious libations of cold water, and a few days spent in the open air, to be all that is required as treatment; loss of sleep for a night is not of the least consequence.

5. In cases of periodic mania which run a given course, where excitement gradually increases till it reaches a climax and then gradually subsides, I have of late years only occasionally had to give continuous sedatives to render the patient manageable, or hypnotics to enforce sleep for the patient's sake and that of others. Thorough continuous out-door exercise is the proper treatment for such cases. Latterly I have dieted several of this class

on milk, vegetables, and farinaceous food, and I think with good result. We know certain diets in certain constitutions produce irritability, discomfort, and the converse.

6. In epileptic insanity, the influence of continued treatment by bromide of potassium in preventing excitement and reducing the number of fits has been so long proved that I should think the treatment is made use of in most asylums, or should be. Dr. Macphail, in his valuable essay on the blood of the insane, found that the blood of epileptics treated daily with ninety grains of the bromide for periods of over two, ten, and fifteen years had not been deteriorated by the prolonged use of this drug. I have, however, noticed that epileptics who have been long under this treatment are liable to have congestion of the bases and posterior portions of their lungs; this condition seldom passes further than congestion. Until I recognised the state and its cause, I frequently feared epileptics were liable to double pneumonia. After a succession of fits epileptics should be allowed to lie in bed, and during the period of epileptic excitement no sentimental opinion should prevent their seclusion; for the excitement in epileptic insanity differs from that in other forms—it is more easily acted on by outward causes, it subsides more quickly in solitude, and its characters render it more dangerous to the sufferer and those around him.

7. General paralysis. Few cases are more difficult to deal with during their asylum life, none more liable to accident; most of the grave accidents in asylums befall this class of patients. Aggressive habits, without power to make good their threats and actions, are a source of danger from fellow-patients; abusive words, filthy habits, and sudden attacks have often been, though they should not, a provocative of bad treatment from those paid to take care of them. During the period of excitement which in almost every case occurs in the course of this disease, greater attention is needed than in other forms of excitement. More impulsive actions, more utterly hazardous and unreasoning attempts at doing impossible feats, are perpetrated by general paralytics actuated by their delusions of power and grandeur, than we find during the excitement of other diseases. Realising the fatal issue of this disease, less compunction need be felt in keeping the patient under sedative influence during an acute paroxysm. During the five years ending 1884 I admitted forty general paralytics, and during that time thirty-six died without having sustained any grave injury during their asylum life. I must say I feel a source of danger past when

patients of this class lose the power of walking, and I do not regret when such patients become bedridden. I probably differ from many in thinking the habit of propping up weak general paralytics in wonderfully made chairs is not for their good or comfort; it is said to prevent bedsores, but patients at this stage should be kept clean in bed. With 547 patients, 40 of whom are bedridden while I write this, there is not a bedsore in the Carlisle Asylum.

8. In senile insanity I sum up the treatment in a sentence. Nursing, feeding, warmth, the judicious use of malt and spirituous liquids, and an occasional hypnotic. I use chloral with wine. Many public asylums have too few artificially heated single rooms, and night-nursing has not till lately been well enough attended to. Pneumonia and bronchitis, the result of a night's restlessness and exposure, frequently complicate such cases, and no doubt have ended many. A treatise could be written on any of the subjects I have touched on; but as I have to keep within limits, I conclude with some remarks on out-door exercise and treatment by sedatives and hypnotics.

Out-door exercise.—I believe in this we have a natural remedial agent which in the majority of recent cases will subdue excitement and produce sleep, and at the same time re-establish the normal functions of different organs in the body, which too often are in abeyance during the stages of an attack of excitement. Maniacal excitement in chronic patients may be called into and kept in existence by injudicious asylum treatment. I have seen an asylum in which the female chronic element was for several years notably excited, where broken windows in the wards and black eyes among the patients were common, where noise in the daytime was incessant, and even night was made hideous by patients raving and hammering at their shutter, and where all attempts at making the airing-court into a flower-garden had failed owing to the destructiveness of the patients, and this in spite of the free use of many sedatives. By separate treatment of the excited, by exercise and employment, I have seen this changed, and a quietude by day and night scarcely credible take its place.

Sedative treatment.—During the five years ending 1878 I admitted 576 patients; 276, or 47 per cent., were suffering from maniacal excitement. Continuous sedatives were given for periods in 28, or 10.1 per cent. During the five years ending 1882, 677 patients were admitted; in 274, or 40.8 per cent., maniacal excitement was the prominent feature. Sedative treatment

was used in 17, or in 6.2 per cent. In the first five years I used sleep producers in 101 cases, or 36.1 per cent; in the next five years, in 50 cases, or in 18 per cent of the excited patients. I have gone carefully over my records, and my experience is that I give less sedative treatment than I did at one time, that I have to give fewer sleeping-draughts, that my patients do at least as well as they did, and that the asylum, as a whole, is quieter than it used to be. I think that if a patient is continuously treated by sedatives, and kept so under their influence as to keep quiet during an attack of acute excitement, such a case tends to run a longer course than if the excitement were allowed to expend itself. I have noted periodic cases treated with and without sedatives, and during several periods of excitement. I believe most sleep-producers given at night for any length of time produce an irritable mental state, and frequently stomacic discomfort. I am satisfied, however, that even extreme treatment by bromide of potassium, if it stop short of poisoning, produces no permanent bad effect, physically or mentally. I have been limited in my use of sedative drugs lately, principally having used bromide of potassium with tincture of hyoseyamus, and chloral with wine or spirits as an hypnotic. I have used counter-irritation to the head on several occasions without result. My experience of the use of hot baths at high temperatures in acute excitement has not been great, but it has made me question whether the result was worth the risk. I hope to hear from others their experience of sedatives, the Turkish bath, rest and massage, cold to the head, and other remedies which have proved efficacious. Had the results of my practice not been favourable, I should probably not have been so limited in my modes of treatment.—*British Medical Journal*, August 8, 1885.

RIEL'S MENTAL CONDITION.—The following interesting letter on this subject is from the *Toronto Evening Mail*, August 26, 1885:

The newspapers of the Dominion are now divided into two classes on the Riel question. They compose the hangists and the anti-hangists. Riel's mental condition has become of secondary interest, and his position has become subservient to party purposes. There are a few journals which have considered the question apart from political exigencies, and a goodly number of our fellow-countrymen are disposed to look at the matter in a judicial way, and to be even merciful, if any palliation can be

shown for Riel's conduct. The bloodthirsty cry for his life, because he has been the figurehead of a rebellion and has been the cause of loss of life or of property, is always the first impulse of an outraged people, and naturally so, when such dire effects come to our homes. We forget in our indignation that no civilized nation in this age hangs a rebel. We leave that for the barbarians to do. McKenzie, Papineau, T. D. McGee, Cartier and Rolph were arch-rebels, and were not only forgiven, but held seats in our parliament, and became honored citizens. The Fenians made inroads upon our country, and not only devastated parts of it, but also shed the blood of some of our sons. Not a captured Fenian was hung, but after a few years of imprisonment they were liberated, and sent home with money in their pockets. The United States lost over half a million of the best men of the people, and had whole States pillaged and financially ruined by invading armies during four long years of bloodshed. At the close of this fratricidal conflict not a rebel was punished, from Jefferson Davis downwards to the rank and file. Not only so, but ex-rebels are now members of Cleveland's Cabinet. This magnanimity was creditable to that great people, and did much to heal the breach which existed between the North and South.

Riel executed will be a martyr, but Riel imprisoned for life will only be a lunatic or a criminal. The sober second thought of our people will prevail in urging that no legal blood-spilling can accomplish any good. A rebellion of this kind, in which blood is shed, is not murder, as there is no "malice aforethought" against persons in the uprising.

Let us now take the personal history of Riel and see what it will reveal of the mental workings of this man. He has now living a semi-imbecile mother with a religious bias of mind. He had an ill-balanced father, whose hot passions bordered on insanity. Riel was educated for a priest, but so strange was his conduct that the intention was abandoned. His eccentric conduct, mixed with cleverness, was always the subject of comment among his acquaintances. He aspired to be a great leader, and thought himself a sort of coming Napoleon, or possibly the centre of a new religious movement which would supersede the existing Papal power. He was full of impulses and unstable in character, at one time seeking the ordinances of the Roman Catholic Church and at another spurning its priests and rites; full of plans, moods and freaks in which there was no permanence,

and for which there were no adequate motives. This is the record of his whole life. Dreading a competitor for public favor, and as a consequence a rival, on the impulse he shot Scott in the rebellion of 1870. He became frenzied and maniacal when anyone attempted to plead for poor Scott's life.

Between 1870 and 1878, he had been incarcerated in three asylums and duly certified to be insane by medical men—once in an asylum at Washington, U. S., once at Longue Pointe Asylum Montreal, and once at Beauport Asylum, Quebec. At these asylums he was at times maniacal, and had the delusion which guided all his actions—that he was the coming potentate of the age. Round this central idea clustered many minor ones of a like nature. Like many of the insane he had intermissions of recovery, and at these times was competent to transact ordinary business and was wholly responsible.

During the recent rebellion there is no evidence to show that Riel was not sane up to the Duck lake fight. His speeches, his letters and his conduct point to his responsibility up to this time. The excitement was too much for his unstable brain, and as a consequence he broke out into paroxysms of religious mania quite consistent with his personal history. The Metis who were in all the fights say he was at these times only the nominal head of the movement. He did no fighting, planned no campaign, and exercised no control over the Indian and half-breed rebels. Dumont and Dumais were the real leaders and fighters. These captains found it convenient to use Riel because his fanatical and religious appeals influenced their frenzied, ignorant and deluded followers. Riel went about with a crucifix held aloft praying and calling upon the Trinity to assist them. He was incapable of suggesting or carrying out any practical suggestions. When the different fights were going on, he shouted, stamped, gesticulated and prayed "like one possessed," but all his efforts began and ended with these ravings. Anyone who has read his "diary" as written about this time, can see nothing but insane rubbish in his visions, revelations, and prophecies from beginning to end. The evidence of the witnesses both for the Crown and the defence testify to these mental twists in his nature.

A few might be cited out of the many stated. At a wedding which took place at Batoche last April, Riel set apart on a chair a plate full of meat, which he said was for Jesus Christ, who was to be present. Nolin, a cousin of his, and who was a witness against him, said that at one interview he had with Riel, he set an empty chair between them, saying it was for Christ, who was

to be present. This witness is an intelligent man and thought Riel "acted like a fool." Last spring, Riel, ever inconsistent, asked the mission priests to allow him the usual privileges of a communicant. The accomplished Father André, the superior of the Oblate Fathers, testified that he called a meeting of all the priests at the mission to consult about Riel's proposal, and their conclusion was that Riel was not in a fit mental state to permit of his partaking of church ordinances. Father André said in court that the prisoner acted like two men—one shrewd, intelligent and cunning, and the other was a maniac with no sense. He said the least opposition to his plans acted "like a red rag on a bull." This priest was strongly opposed to the rebellion, as well as were his colleagues. Their lives were always in jeopardy because of this man's freaks. The prisoner told one of the medical witnesses that he was a prophet, and could foretell future events especially the coming verdict of the jury. In this respect he turned out a false prophet. This has not shaken his faith in his powers as a seer, as he is still prophesying and will to the end of the chapter. Nothing will shake the belief in himself and his powers. A number of the Crown witnesses testified to the prisoner's cunning and general intelligence at times, but they thought him a queer acting man on the whole.

Take his own speeches at the trial, and in the midst of many clever and sarcastic things said there crop out his delusions of his yet becoming the centre of a great movement. This idea of greatness and unbounded power peoples our lunatic asylums with kings, queens and princes. Take Riel's nonsensical plan of establishing a national heptarchy in the North West, of which he would be supreme ruler in spite of Canadian or British power. Take his idea of locating the Papal See at St. Boniface and of dethroning the Pope of Rome. Take his statement (told by a Crown witness) that when he felt a movement in his body it was made direct by the spirit of God. Take his vehement denials that he is insane—because it would take away from his presumed greatness—although he knew that his life would depend on the success of that plea. Take his physical condition and his actions, so characteristic of the insane, and which cannot be simulated nor described in words, and it is evident that Riel is either insane or is a most consummate schemer. Anyone who has closely followed the history of this unfortunate man must acknowledge that were he an obscure person, and not the centre of two rebellions, these and kindred fears would be sufficient to consign him to any asylum in Christendom.

The medical testimony was purely negative, as the experts had neither time nor opportunity to determine beyond controversy whether the prisoner was a deceiver or not. The chief Crown witness had only examined him for half an hour, and although in that brief time he saw nothing insane, yet he was not prepared to say he was not insane. Another medical witness stated that, assuming the prisoner was not scheming, and accepting the truthfulness of the statements of the various witnesses, he had no doubt of Riel's insanity, but was not prepared to state it on his own cursory examination. He added that a man like Riel would need weeks of observation to make even an expert sure of his mental condition.

Taking all these alleged facts into consideration, and knowing how clever, intelligent, and cunning many lunatics are, it becomes a Christian public to pause and examine before this man suffers the extreme penalty of the law. We are not to judge of him from the sad mischief he has done, but of his responsibility in these acts. The politics which would not hesitate to urge the taking of life irrespective of those considerations, must lead to bloodguiltiness in any people, who could look upon such a course with complacency and without proper enquiry.

NEW NOMENCLATURE OF MENTAL DISEASES.—Dr. Henry Sutherland, lecturer on insanity at the Westminster Hospital, makes the following remarks (*British Medical Journal*, August 8, 1885), upon the Section of Mental Diseases in the New Nomenclature of the Royal College of Physicians :

In order to estimate correctly the value of this new classification of mental diseases, it is necessary, for comparison's sake, to refer briefly to the original subdivisions of these disorders, published by the College of Physicians in 1869, and also to Skae's and Esquirol's classifications, to which, it is evident, the present one is indebted in no small degree.

The following table, where the order in which the diseases were arranged has been slightly altered, so as to bring those called by the same name side by side, will show at a glance the sources from whence the new classification has been derived.

College of Physicians, 1869.	College of Physicians, 1885.	Skæe.
Mania.	1. Insanity.	Idiopathic mania.
Melancholia.	2. Mania.	(a) Sthenic. (b) Asthenic.
Monomania.	3. Hypochondriasis.	
Dementia.	4. Melancholia.	
	5. Monomania.	
	6. Dementia, including ac- quired imbecility.	
General paralysis of the in- sane.	7. General paralysis of the General insane.	paralysis of the insane.
Idiocy. Imbecility.	8. Idiocy. Synonym, con- genital imbecility.	Idiocy } Intellectual. Imbecility } moral.
Puerperal mania.	9. Puerperal insanity.	Mania of pregnancy.
(a) Connected with par- turbation.		Mania of child-bearing.
(b) Connected with lacta- tion.		Mania of lactation (and other forms of sexual insanity.)
	10. Epileptic insanity.	Epileptic mania.
	11. Insanity of puberty.	Mania of pubescence.
	12. Climacteric insanity.	Climacteric mania.
ESQUIROL.	13. Senile insanity.	Senile mania.
Mania.	14. Toxic insanity, from gout, alcohol, lead, etc.	Metastatic mania.
Lypemania (melancholia)	15. Variety (52). Delirium tremens.	Dipsomania. Delirium tremens.
Monomania.	16. Traumatic insanity.	Traumatic mania.
Dementia.	17. Insanity associated with obvious morbid change or changes in the brain.	Sunstroke mania.
Idiocy or imbecility.	18. Consecutive insanity from fevers, visceral in- flammations, etc.	Phthisical mania. Syphilitic mania.
College of Physicians, 1869.	19. Cretinism.	
Cretinism.	20. Myxœdema.	

Anyone who has studied the A B C of the subject, is aware that all classification must be founded, according to the divisions of mind supposed to be affected (as "emotional insanity"), or according to the mental symptoms (as "mania"), or according to the bodily conditions associated with the mental disturbance (as "traumatic insanity").

The Committee for Mental Diseases, very wisely discarding the first of these classifications as being unpractical, have arranged these disorders of the intellect under two important divisions; the first including forms of insanity arranged according to mental symptoms, the second according to the bodily conditions connected with them. This second division is further subdivided into those diseases of the mind dependent upon certain periods of life; those dependent upon external causes, and those dependent upon internal causes, which most probably arise from some disease of the nervous system.

If these diseases were arranged according to this subdivision, the list would read as follows.

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If these diseases were arranged according to this subdivision, the list would read as follows.

Insanity Characterised by Mental Symptoms.—1, Insanity; 2, Mania; 3, Hypochondriasis; 4, Melancholia; 5, Monomania; 6, Dementia; 7, Idiocy; 8, General Paralysis. II. *Insanity Dependent upon Bodily Conditions.* (A) *Period of Life.*—9, Insanity of Puberty; 10, Puerperal Insanity; 11, Climacteric Insanity; 12, Senile Insanity. (B) *External Causes.*—13, Toxic Insanity; 14, Delirium Tremens; 15, Traumatic Insanity; 16, Consecutive Insanity; 17, Cretinism. (C) *Diseases of the Nervous System.*—18, Insanity of Brain-changes; 19, Epileptic Insanity; 20, Myxædema.

Anyone seeing this classification for the first time, must at once come to the conclusion that in it, to conciliate the disciples both of Esquirol and of Skae, substantives, such as the word dementia, and adjectives, such as climacteric, have both been allowed a footing. An improvement has been made by substituting the term Insanity, for the term Mania, so often and so inappropriately used by Skae; and at least half a dozen of his forms of insanity due to sexual disturbance have been omitted.

Granting the necessity for those forms of insanity qualified by an adjective being included in the new classification, to satisfy scientific prejudice, it must be confessed that the Committee has performed its task with moderation and success. More especially would I direct attention to the two divisions "Insanity from Brain-change," and "Consecutive Insanity," as being both liberal in principle, and including a vast number of cases concerning whose etiology and pathology conflicting evidence might be adduced.

Modern research has necessitated the addition of the term "Myxædema;" although much like its brother-disease, General Paralysis, the bodily symptoms are chiefly conspicuous.

Having said thus much in praise of this new classification, I may now turn a critical eye upon its deficiencies.

In the *Nomenclature of Diseases* of 1869, hypochondriasis was included under the head of "Functional Diseases of the Nervous System," and not, as at present, under "Disorders of the Intellect." Of course, the same word may bring different ideas to different minds; but to my thinking, there is nothing certifiable about hypochondriasis, pure and simple, as long as it does not glide into melancholia; and surely uncertifiable diseases ought not to find a place amongst mental diseases, if we wish classification to assist us in medico-legal questions.

The same remark applies to delirium tremens, a disease which often consigns the patient to an asylum, but which nevertheless in

itself does not constitute insanity until it passes either into mania *a potu* or chronic alcoholism.

I regret to see the term Monomania retained. Does it apply to one delusion or to one groove of delusions, or is it equivalent to exaltation?

Again, the would-be note of explanation attached to Dementia (I refer to the words "including acquired imbecility") is, I think, misleading. It would be far better to keep the term Imbecility for children, and Dementia for grown-up people, being consecutive or not upon other forms of insanity.

I may make a similar remark upon the explanation attached to Idiocy (I refer to the words "synonym, Congenital Imbecility." The writings of Drs. Down, Ireland and Beach, need only to be consulted for a moment to discover that idiocy is very frequently not congenital; as, for instance, when it is traumatic or when it succeeds scarlatina.

Cretinism and Myxœdema might surely have been briefly mentioned under the head of Mental Diseases, as well as being included amongst those "not classified."

With these few exceptions, the work has been well done. Both schools, the Somatic and the Mental, have had their claims recognised, and this is something.

There can be no doubt that the more simple a classification is, the better for those who are obliged to use it.

There are but four states of mind which can be considered abnormal; one of excitement, one of depression, one of exaltation, and one of fatuity, corresponding to the old terms of Esquirol, (1) Mania, (2) Melancholia, (3) Monomania (?), and (4) Dementia. Congenital Dementia should be called (5) Idiocy and non-congenital "Dementia" proper. To these five substantives, any adjective the wildest imagination might suggest could be easily added.

In addition, the word (5) "Insanity" should be kept, and also (7) "General Paralysis," a disease so strongly marked out by its characteristics as to render it incapable of being classified with ordinary mental disease.

Concerning Epilepsy, I am doubtful. It is an attendant's term for a certain class of cases; but, considering the fact that it accompanies all the seven forms mentioned above, in many cases it can scarcely be counted apart from them without making the terms overlap.

Mania, Melancholia, Exaltation, Dementia, Idiocy, and General Paralysis, combined with a free use of adjectives, ought to satisfy

the most pedantic scholar, and it is not certain that the one term "Insanity" would not be sufficient for all practical purposes.

TREPHINING FOR EPILEPSY.—A year ago last April, says the *Indianapolis Journal*, August 30, 1885, Dr. Fletcher reported a case to the Marion County Medical Society, of the permanent cure of epilepsy at the Indiana Hospital for the Insane, by removing an area of depressed bone an inch in diameter, which had been mashed down upon the brain by a fall from a house-top six years before. The lifting of this little tablet of bone made the patient a changed man. No camp-meeting conversion was ever more complete or effectual in the work of mental or moral reform. He no longer craved alcohol or narcotics; he lost his suicidal mania and murderous tendencies—no longer raved, fought or swore as in the six years preceding, but became as mild a mannered man as one would wish to see, and in the following September was sent to his home in LaPorte county completely cured.

A very similar case has just occurred at the hospital, the patient being a workman in the Eagle machine shops, of this city. Three years ago the patient was struck by a piece of iron, causing fracture and depression of the skull and unconsciousness for eight or ten days. After five months he resumed his work, but, in the course of the following year, became inattentive to business, irritable on the slightest annoyance, reckless and destructive, with gradual loss of memory. Upon July 30, he was admitted to the hospital, and came under Dr. Fletcher's care. External inspection showed little appearance of injury, but after cutting through the scalp a small depression was found in the bone. The membrane over the place was removed, when a loose splinter of bone about as large as a carpet tack was discovered. This was removed, with a portion of the skull three-fourths of an inch in length. The hemorrhage was so severe as to imperil the life of the patient. All the diseased bone was removed, the bleeding controlled, and in an hour after the effects of the anæsthetic had passed away, the patient expressed himself as feeling relieved from the unpleasant sensations that had annoyed him for the last three years. His appetite returned, and the following day he took, as he said, "the first good square meal he had enjoyed in three years." Five days after the operation he was discharged as cured.

THE MENTAL SYMPTOMS OF AORTIC REGURGITATION.—Mr. J. Harrington Douty, Senior Assistant Medical Officer to the Worcester County Asylum, England, has collected (*Lancet*, August 22, 1885,) an interesting series of observations showing the relations between incompetence of the aortic valves and insanity. We reproduce the following summary of the author's conclusions:

We find that of the fourteen cases no less than eleven are of mania; there is one of dementia, one of dementia with general paralysis, and one of melancholia. It is evident, therefore, that as far as this small collection of cases is concerned, no less than 78.5 per cent. are instances of the association of mania with aortic regurgitation. Of these eleven cases of mania no less than seven possessed very marked auditory and visual hallucinations. It seems probable that when fuller statistics are forthcoming upon this subject we shall arrive at a conclusion that the typical mental symptom of aortic regurgitation is a delusional mania, coupled with a condition of extreme instability of temperament. Patients whose aortic valves are incompetent, who are insane, are almost without exception of a touchy and excitable nature; very little upsets them; on the least provocation they will try to fight and struggle with their nurse to attain their own way, and are consequently very difficult and dangerous cases to nurse. As surely as one discovers an aortic regurgitant bruit, almost so surely is one told by the attendant of the obstinacy and irritable temper of the patient, the least thing causing a violent outburst of anger and abuse. Another very common and interesting accompaniment of this valvular lesion is the prevalence of hallucinations, whose cause, however, it is not difficult to find. General clinical observation tells us how any alteration in the state of the circulation may cause symptoms which, if persistent, would soon develop into delusions. The tinnitus resulting from an anæmic or congested brain; the clouds and obscurities complained of by the subject of grave heart lesions; the giddiness and buzzing complained of by the anæmic girl; the troublesome throbbing, humming, or whistling noises which are heard by a patient who suffers from nocturnal palpitation, are familiar points of interest. It is probable that the hallucinations resulting from aortic disease or any cause other than a local lesion of the ear or eye, are usually of central rather than of peripheral origin, for they are common in cases in which the organs of special sense have been disorganised for years. We know that usually the flow

of blood through the capillaries should be constant and equable. We may infer, therefore, that the blood flowing through the minute vessels of the internal ear, the retina, and the brain itself, does so in a fairly continuous stream in health; and that not only is the rate equable, but the pressure is also constant, or at any rate not subject to any sudden and frequent variations. Given, however, a grave reflux through aortic valves, and the converse of these conditions is established; the pressure in the capillaries becomes rhythmically various, increasing and diminishing with every cardiac systole and diastole. We know how acutely sensitive are the nervous centres and their peripheral arrangements of any departure from the normal. Such a condition of things, therefore, as that resulting from a grave aortic incompetence may produce a material interference with and perversion of the performance of their functions. It seems but natural, therefore, that, in the majority of cases associated with aortic reflux, hallucinations should be so common. Of course many things may occur to prevent the development of hallucination, and complications may arise to mask the evidence of their existence. They are prominent symptoms in 50 per cent. of the cases I have quoted. It is further noticeable that amongst the cases of mania several who had not hallucinations had exalted delusions and symptoms of general paralysis; this association of exaltation of idea and general paralysis with aortic regurgitation may be accidental, or it may result from the cardiac hypertrophy which naturally attends such lesions, and which has been described by Dr. Savage as productive of symptoms resembling those of general paralysis. One only of the fourteen cases was a simple dementia. The patient was listless, apathetic, and weak-minded, and had a feeble memory. Dr. Douglas Powell says he considers a certain amount of torpor and fatigue of mind to accompany many cases of aortic regurgitation, and to be relieved by the recumbent posture. This patient with dementia had, I should mention, hallucinations of sight, and would insist that she saw people walking about in the night. She assisted one of the night nurses, and one night declared she saw me go into one of the wards at two or three in the morning, calling the nurse's attention to the "Doctor going down the passage." The case of "melancholia cum stupore" was the direct result of acute rheumatism, from which the patient had just recovered before admission, and which left him emaciated, feeble and anæmic; consequently the melancholic prevailed over the maniacal

symptoms, which might have been prominent had his case been an uncomplicated one. It is interesting to note that heredity to insanity only existed in three out of the fourteen cases; sunstroke and drink were possible factors in two; in all the others no probable cause existed other than the heart lesion; and in the three with heredity one cannot say how far the heart disease was an exciting factor which developed the predisposing cause. How far the drink and sunstroke acted as causes in the two cases is also questionable; they neither of them recovered; one died, and the other is a chronic case. Had drink alone been answerable for the mania they might have recovered; atheroma and aortic disease, however, resulted from the drink, and hence death and chronicity. The typical form of insanity, then, resulting from aortic regurgitation is probably a delusional mania, frequently associated with very marked hallucinations and with a tendency to violent outburst of rage and anger. That in many such cases no exciting cause for the insanity can be found other than the heart lesion, is also evident from the fact that in twelve out of only fourteen cases this was so. The recovery rate for these fourteen cases of insanity is 0 per cent.; this fact points strongly to the importance of the heart mischief as a causative factor; the insanity is a symptom of an incurable organic lesion, and as such is also itself incurable. Rest as a therapeutical agent is more or less serviceable in these cases; a few have recovered for a brief period sufficiently to leave the asylum, but they soon returned. If we had access to their aortic valves, and could repair their lesion, then we might possibly alter our prognosis.

THE MANIA OF THE AGE.—Every age seems to have its intellectual nostrums—its poor, quack remedies by which society is to be purified, elevated, and purged from the degrading bits of humanity which still cling about it. To-day the universal remedy for all ills that flesh is heir to, whether mental or physical, is supplied by “work.” It has always been the fashion to revile one’s age; and we shall only be following a precedent, sanctified by the example of hundreds of generations of men, when we remark that the pose of “work” is little less funny than was that serio-comic distress of mind and laborious perception of “the vanity of all things” that the true disciple of the Byronic school gradually achieved. But Byron’s follower had this undoubted advantage over the work-oppressed creature

of to-day, in that the modernized system of Ecclesiastes provided a safety valve in a sort of traditional right to debauch, whereas nowadays our poor workworm gets no respite from the service of his god. It is often said that in these days "the schoolmaster is abroad," and one is sometimes tempted to wish that he really were, and that he would stop there for a very long time, so that his mental health might be quite restored, and that the poor man-worms in the shape of boys and youths might have some respite from those who heap up examination upon examination, perverting and narrowing the human instincts into a formula that reduces the object of life to the attainment of a series of certificates, and projects the shadow of the grindstone over all that men do. Laborious and complicated systems of education, a multiplication of dreary horizons of past or future examinations, poison and dull the creative faculties, and are as a canker at the root of spontaneity and delight in invention, associating in the mind all expression of thought in words or form with the tedious work done in the class room. Fools of to-day are equipped, too, with a power and capacity for foolishness unknown in days when knowledge was sought by those only who loved it for its own sake, and who perhaps generally knew how to use it.

The trail of work, the duty of expending ourselves and getting as much out of life as possible, is over us all. Would we indulge in games for recreation, it is our duty to play them as well as we possibly can, and should we neglect to do so we are convinced that we are thereby sacrificing so much of those possibilities that our capacities for development might afford. Thus one after another we reduce all social games to what lawn tennis has now become for the average man or woman, an "abomination of desolation." Can we not see in this springtime of socialism that it is a sin against society to develop individual skill at the expense of the happiness of the community, and that the too-cunning lawn-tennis player, along with all others who have the self-development craze abnormally developed, should be hunted out into the wilds of the new Empire of the Congo, or to some other safe place, where they may have leisure to reflect upon their sinful want of the sense of the right proportion of the individual in society? A bygone generation was in the habit of sighing for rest, but now it is the habit to sigh for more work and greater responsibilities. Were there to arise a new St. John on the Isle of Dogs, he would construct as his heaven a sort of glorified London, in which the smoke should be miraculously

spirited down a big smoke drain into the Thames, so that no fogs might enter his paradise, and where no atmospheric effects should interfere with work and business. There, too, he would promise ceaseless activity and eternal freedom from the curse of sleep as the attractive conditions of the ideal life, and would look forward to the possibilities of being allowed to govern or make experiments on the inhabitant of other worlds as a reward for having got as much as possible out of life in this present existence. This latter occupation would perhaps be the final work for a capable and well-developed man.

In this renaissance of what might be termed the "fall of man," the daughters of Eve have resolved at all cost to eat of the fruit of the tree of the knowledge of good and evil, and they, too, in company with men, are running a break-neck race along the road of self-development. Indeed, some of them have got so near their "ultimate expression" that they can apparently afford to gaze calmly back as they remark axiomatically that "none should obtain praise for work, for it is a necessary condition of happiness." Again, the spiritually minded young woman who seems about to try and find rest in devotion to, and strict observance of, the ordinances of the Church, is nowadays recommended by her advanced sisters a course of work as a cure for her maudlin tendencies, instead of being treated to a prescription of balls and parties. Even the mystically respectable trinity of "Banking, Beer, and Blood" can not resist the influences of work in the air, but must needs cudgel its brains to shine intellectually or artistically.

No doubt the tendency to glorify all those who work or who get their living by their wits brings with it many advantages, but the struggle among those who aspire to be glorified is a grimly comic one. Most aspirants for honor in the new social heaven, either through a morbid eagerness to excel or a dread lest they should be superseded by others, live in a chronic state of over-work, which of itself precludes the possibility of their doing the best work of which they are capable. Life has got to be little more than a game in which one *dares* not stop making points. The marks of the schoolroom have only been exchanged for other symbols—pounds sterling, position, fashion—all of which are carefully reckoned up in the Great Book of "Notoriety." Man seems to be made for work, and not work for the betterment of mankind.—*Pall Mall Gazette*, June, 1885.

BOOK NOTICES AND REVIEWS.

A System of Practical Medicine by American Authors. Volume II. Edited by WILLIAM PEPPER, M. D., LL. D., Provost and Professor of the Theory and Practice of Medicine in the University of Pennsylvania. Philadelphia: Lea Brothers & Co., 1885.

The second volume of Pepper's System of Practical Medicine comes to us in clear, handsome type, and lays before us a series of articles from the pens of men so well known that they invite careful attention. Dr. Pepper aims to present to the medical profession the ablest work and the ripest thought of the time. How well he is succeeding, the present volume, like its predecessor, bears ample testimony. The opening pages of Volume II are given up to the continuation of the discussion of the so-called General Diseases, and form, practically, the conclusion of Volume I. The articles on Rheumatism and Diabetes Mellitus are especially worthy of note, and present a careful review of the most recent developments in the clinical study of these distressing maladies.

The discussion of the Diseases of the Digestive System is next taken up, and our attention is at once arrested by such names as Alonzo Clark, Roberts Bartholow, J. Solis Cohen, and others.

An exceedingly interesting article on Peritonitis is from the pen of the venerable Dr. Clark. More than forty years ago Dr. Clark introduced to the profession the opium treatment for this painful and dangerous disease which, until then, had been uniformly fatal. "In 1832," says Dr. Clark, "I began to visit hospitals as a medical student, and for eight years, at home or abroad, was almost a daily attendant. The number

of recoveries of those that I saw in that time can be counted on the fingers of one hand." In strong contrast to this alarming mortality stand the results obtained by the heroic use of opium. Of the first nine cases so treated, eight recovered, and Dr. Clark became sponsor for a method of treatment that has since spread over the civilized world.

Bartholow has presented a comprehensive and admirable discussion of the diseases of the liver, and the articles by Dr. Welch on Gastric Ulcer, Cancer and Hemorrhage are rich in pathology and in every way worthy of their distinguished author. It is especially gratifying to find this subject occupying such a prominent place in a work on general medicine, for, at the present time no one can question that an accurate knowledge of pathology must form the permanent foundation for the rational treatment of disease.

There is much more in this volume on which we might make favorable comment, but our limited space compels us to content ourselves with this brief mention. Its merits alone are quite sufficient to win for it prompt recognition and a widespread welcome.

Hand-book for the Instruction of Attendants on the Insane.

Prepared by a Sub-Committee of the Medico-Psychological Association appointed at a Branch Meeting held in Glasgow on the 21st of February, 1884. London: Baillière, Tindall & Cox, 20 King William Street, Strand, 1885.

The authors of the manual set forth its aims in the following introduction: "This hand-book has been prepared in the hope of helping attendants on the insane to a due understanding of the work in which they are engaged. It is sought to give them such simple notions of the body and mind in health and disease, such instructions for the management of those

maladies with which they are usually brought in contact, and such rules for their guidance in matters of every day experience, as will enable them to do their work with greater intelligence and watchfulness. It is designed that these instructions should aid attendants to carry out the orders of the physicians; but it is to be distinctly understood that in no case is anything contained in this book to over-ride the special rules of any institution, or special orders in regard to any individual case."

That some book on this subject was needed can not well be doubted, and perhaps the reason that no one has ventured on earlier authorship in a systematic manner is to be found in the difficulties which the task involved. This difficulty has been attested by the opposition which the venture encountered in its preparation, and it is an open secret that many sections of the manual were vehemently fought in committee. Be this as it may, we can not but commend the manner in which the sub-committee has on the whole performed its task, and it would not be invidious to make special mention of the convener, Dr. A. Campbell Clark, the enterprising superintendent of the Glasgow District Asylum, who in his share of the work has shown once more the keen interest he feels in everything pertaining to the training of attendants.

The book has sixty-five octavo pages, and is divided into five chapters, namely: I, The Body, its general functions and disorders; II, The Nursing of the Sick; III, Mind, and its disorders; IV, The Care of the Insane; V, The General Duties of Attendants. Shortcomings there doubtless are, but these are trifling compared with its merits. The fact that 3,000 copies have already been sold, thus exhausting the first edition, is sufficient evidence of the favor with which

the book has been received. A second and improved edition will doubtless be in the market before long. In these days when efforts are making at home and abroad to raise the status of attendants on the insane, this hand-book will be a helpful means to the attainment of that desirable end.

Lectures on the Diagnosis of Diseases of the Brain. By W. R. GOWERS, M. D., F. R. C. P., Assistant Professor of Clinical Medicine in University College; Physician to University College Hospital and the National Hospital for the Paralyzed and Epileptic. Philadelphia: P. Blakiston, Son & Co., 1885.

This little book, as its title announces, consists of a course of lectures delivered by the author before the students of a London medical school, and, although of unpretentious size, it grapples with one of the most difficult subjects that confront the general practitioner, a subject which "transcends in complexity, and perhaps exceeds in interest, all other problems in practical medicine," viz., the diagnosis of the diseases of the brain.

Dr. Gowers is working in a field already long occupied by such eminent men as Lockhart Clarke, Meynert, Foville and Ferrier, whose united labors "have brought to light an immense number of facts and have built up a large mass of knowledge." The plan of the work, beginning with the anatomy from a physiological stand-point, and then proceeding to the morbid conditions with their subjective and objective manifestations, is logical and commendatory, but it is to be regretted that the author has devoted so much space to theoretical deductions from experimental physiology. There is often an unfortunate lack of that practical instruction which we should expect from a man of his extensive hospital experience. For example, in

reference to the differential diagnosis of apoplexy, he makes but casual mention of temperature and dismisses reflex action in the following words: "In coma, the reflex action in the limbs is usually lessened and often lost."

The chapter on affections of speech is interesting and instructive. The writer maintains that "the left hemisphere has by no means a monopoly of speech function. The right hemisphere contains structures of similar position and similar connections. These structures can supplement those in the left hemisphere." In conclusion we may add that while we find little that is essentially new, and are not infrequently embarrassed by ambiguities that are somewhat puzzling and annoying, the book as a whole is a valuable addition to the literature of cerebral localization and disease, and a worthy companion to the author's well-known volume on the Diagnosis of Diseases of the Spinal Cord.

REVIEW OF ASYLUM REPORTS.

CANADA:

Report of the Medical Superintendent of the Provincial Lunatic Asylum of St. John, N. B., for the year 1884.

This is the 37th annual report of this Institution and covers the year 1884, from January 1st to December 31st. The statistics are:

Number of patients, January 1, male	195,	female	172.
Admitted during the year,.....	" 66,	" 57.	
Discharged recovered,.....	" 22,	" 18.	
Discharged improved,.....	" 16,	" 13.	
Discharged unimproved,.....	" 1,	" 4.	
Died,.....	" 24,	" 12.	
Remaining December 31st,.....	" 198,	" 182.	

It will be seen that the whole number under treatment was 490, and of the 380 remaining, it was "estimated" that 47 only were "curable" cases, and the rest incurable. In the 10 years past, the number under 20 years of age at the date of first attack was 181 out of a total of 1,249, and under 40 was 875. The nativity of 941 was in the Dominion of Canada. As to civil condition, 682 of the whole number were "single" persons. Of the total for the year 1884, being 490, 453 were supported by the Province.

In the table of causation we observe that "Heredity with no other cause assigned" is credited with 110 cases, while 24 are set down to "religious excitement," and several to such causes as "disappointed affections," "undue excitement," "nostalgia," "inherent evil affinity," "misplaced confidence," "abandonment," "illness," "poverty and vagrancy" and "Spiritualism." It might be inquired whether "causes" like these might not sometimes be *effects*, or concomitants, or symptoms of the *disease* of insanity.

Of the 123 admissions 74 were cases of "first attack," and of the 40 recoveries, *all* were of less than a year's duration. Of the recoveries, nine were cases of melancholia, the rest of some form of mania. As to causation in the cases recovered, 14 out of 40 are set down to "Ill health or dissipation with heredity," four to intemperance and six to "defective nervous organization." Of the 36 deaths, 10 were from phthisis, or tuberculosis and five from epilepsy, one being ascribed to *autocheiria* [why not "Suicide?"] We are somewhat surprised to see that *four* of those who died have their insanity dated "from birth."

Referring to previous reports for remarks upon his statistical tables, Dr. Steeves at once enters upon the question how to provide for the "accumulating chronic

and incurable insane?" The question of separating the two classes of acute and chronic cases, he admits is still undecided by the majority of medical men, but the increase of taxation, he thinks must decide it, inasmuch as in his own words, "In this Province the cost of maintaining the insane, where it is done more economically than anywhere else, absorbs one-fifteenth of the entire revenue." The accumulation of chronic cases has reached a point he thinks, at which they constitute seven-eighths of the entire insane population.

He therefore proceeds at some length to advocate the plan already adopted in many places, a system of detached groups of cottages or pavilions of cheaper construction in the vicinity of the main hospital, with a large farm attached and shops for the various trades. He quotes a number of authorities who have tried the experiment, such as Dr. Clouston, Dr. Godding, Dr. Chapin, and the Asylums at Ward's and Hart's Island, Willard, Cranston, R. I., Middletown, Conn., Kankakee, and several in England. It is substantially the plan advocated by Dr. Smith, the Commissioner in Lunacy of this State, and asked for by the Board of Managers of the State Hospital at Poughkeepsie. Of course, all our State hospitals have farms attached and outdoor labor is encouraged to as great an extent as is allowable for *sick men*, which the insane as a rule are. The feature of difference is, the provision of a system of outhouses, or "one story pavilions" in scattered groups, which must make such matters as supervision, heating, cooking, feeding and laundry, much more difficult and expensive. "Cheaper construction" in plant might soon be neutralized by a higher or more elaborate scale of current expense. And if many were so happily situated in a "wooden country" as Dr. Steeves, where the supply of such fuel bears some proportion to the

severity of the climate, as he proposes to warm his cottage with *wood stoves*, the exigencies of keeping rooms comfortable might, not only furnish considerable occupation for patients, but also plenty of "risks," not "first-class," to both fire and life insurance companies. It is a little suggestive how soon the "new departure" at Kankakee resulted in a casualty of this kind. Certainly, under the best system of management, this is the one most imminent danger of all insane hospitals to be guarded against, as the experience of nearly all our asylums testifies.

What Dr. Steeves says of the Criminal Insane and the distinction in Canadian law which excludes from the Criminal Asylum all but actual convicts, we fully agree with.

Seventeenth Annual Report of the Inspector of Prisons and Public Charities on the Asylums for the Insane, and the Asylum for Idiots of the Province of Ontario, for the year ending 30th September, 1884. Toronto.

The Inspector reports that the whole number of insane, idiotic and feeble minded persons known to his department as residing within the Province of Ontario at the close of the year, was 3,127, or 180 more than in the preceding year. The whole number of insane in actual residence at the four asylums of London, Hamilton, Toronto and Kingston had increased from 2,594 in 1883 to 2,671 in 1884, besides 51 lunatics still awaiting vacancies. There were 33 insane convicts in the Kingston Penitentiary for Insane Criminals, and 76 insane and idiotic in the common jails. The number of admissions to the four asylums was 508 as against 543 the previous year, but the admissions are limited by the number of vacancies. The Inspector does not tabulate the discharges, but

states that the percentages of cures to admissions are, for the Toronto Asylum, 34.50; London, 30; Kingston, 33.03, and Hamilton 48.62, which last is higher than ever before reported.

Under the system of "probational discharges," the following results are given: Whole number sent home on probation, 149; discharged recovered, 73; improved, 18; died, 1; returned to asylums, 28; still out, 29. The Inspector thinks the ratio of insanity to the population is not increasing; but as in the statistics, idiots and feeble minded persons are included, it is not easy to determine this question.

The Inspector highly commends the system of probational leave of absence, as a positive aid to ultimate recovery. He also very properly urges the application of the law as regards inspection and supervisions to Private Asylums, of which there is one example in the Province, the "Homewood Retreat" at Guelph, of which the Inspector speaks in high terms, as the only one affording special treatment to cases of inebriety and the opium habit, to which he would add epilepsy, hysteria, chorea, and others not so readily certified as insane.

Dr. Bucke's report of the London Asylum for the year ending September 30, 1884, shows admissions 132; whole number under treatment 1,027—men 520, women 507; remaining at end of year 450 men, 457 women. Discharged recovered, 39; improved, 20; unimproved, 7; not insane, 1; died, 50; eloped, 2; transferred, 1. One death was a suicide while out on probation.

Dr. Bucke professes to have made certain discoveries in regard to the use, or rather the disuse of alcohol, which perhaps may be relegated to the sphere of individual idiosyncrasy. He is right to push the factor of manual labor as far as patients' personal comfort

and right will admit, but we hope he will have no further occasion to explain why the maintenance account of his institution has been increasing for some years. No one advocates the use of alcohol, or any other therapeutic or hygienic instrumentality, except where necessary. We observe that of his recoveries none were admitted previous to March, 1882; and of 907 patients over 800 are chronics, 309 of them "in residence for over ten years."

Dr. Clark reports for the Toronto Asylum 143 admissions, of which 49 recovered; total under treatment 846, deaths 52; remaining in asylum, September 30, 703. Of 16 sent home on probation, all except one recovered. On the subject of work, Dr. Clark says: "Last year our average population was 703. Out of this number 214 were regular workers; this made an average of nearly 30½ per cent. Private patients do little work for the asylum, so it is only fair to deduct 274 of this class, making a ratio of about 45½ per cent. of our free patients who were engaged in manual labor of one kind or another. At the beginning of 1884 we did the most of our indoor work in the wards, and have done so ever since. It is found that the presence of working patients among those who formerly performed no work, had an imitative and stimulating effect upon the latter class. The result has been very satisfactory, and shows that 456 patients have been thus employed during the current year, making 90 per cent. of the free patients, or more than double of the number in the previous year."

Dr. Metcalf, whose sad death is noticed elsewhere, makes for the Kingston Asylum what proves to be his last report: Admissions, 132; under treatment, 581; discharged, 53; died, 25; eloped, 3. Remaining—men, 253; women, 247. The Doctor justly complains of the

transfer of prisoners from the Kingston Penitentiary to the asylum, there being 25 such cases, which properly belong to the Criminal Asylum. Dr. Metcalf, while not fanatical on the subject of restraint, shows how it can be reduced to *nil* by sufficient amusements, employment, diversion of mind, &c.

Dr. Wallace reports for the Hamilton Asylum, 109 admissions, of which 49 were from the county jails; under treatment, 656; discharged recovered, 53; improved, 6; unimproved, 3; died, 28; escaped, 5; remaining, September 30, 561—265 men and 296 women. The residence of those recovered was from $3\frac{1}{2}$ years to 3 months. Number out on probation 40, of whom 29 recovered, 10 returned.

This asylum has fortunately obtained a new east building, and is to have another to the west, which will greatly improve its facilities.

NOTES FROM ABROAD.

[*From our British Correspondent.*]

PSYCHOLOGICAL SECTION OF THE BRITISH MEDICAL ASSOCIATION.—The programme this year was a very poor one. Cardiff is not popular as a holiday resort; it is not easy of access, and the turn out of visitors was very small. Dr. Yellowlees filled the presidential chair, and gave an eloquent address on the Causes and Prevention of Insanity. The subject was certainly worthy of a great effort, but the attitude taken in regard to the treatment of it was scarcely in keeping with the reputation of the president. Cast in a deep religio-moralistic mould it was not calculated to find ready acceptance among an audience which should at the time and place be keenly scientific. The address is nevertheless extremely interesting, giving as it were in perspective many views on a variety of problems relative to the subject of the address. It contains much debatable matter, and but for the absurd custom (which is supposed to be a courtesy) of not discussing the address, some new things might have come to light had the subject been thoroughly digested.

Dr. Campbell, of Carlisle, a famous warrior in psychological fields, provided a treat in the form of a paper on the Treatment of Maniacal Excitement. He infused his subject strongly with his own experience, and gave a clever, forcible and argumentative paper. He is strongly in favor of bromide treatment in epileptic excitement, and others expressed themselves as strongly against it. He traversed a wide field, and his paper is worthy of perusal as being in many respects illustrative of English practice.

The furore over lunacy legislation has not ceased. Dr. Hack Tuke had a paper on the subject prepared with his usual care, and expressing many sensible views, such as that the number of commissioners should be increased, but containing many views liable to contention. Among psychologists there is the wildest divergence of opinion on the subject. Such being the case what can our legislators think of us?

Recent Lunacy Trials.—The mania possessed by discharged or recovered lunatics for dragging medical men who certified them into court is very much on the increase. A new means has thus been discovered of completely wrecking the prospects in life of a medical man on the very slenderest evidence. It is no secret that the victims of some recent trials of this kind are literally beggared by the actions raised against them. The latest case is that of Neaves vs. Hatherly. The plaintiff is an old maid with ill-guided impulses. She had conceived strange delusions regarding the inmates of her mother's house, such as that her mother's brain was being softened by ether; that her brother and the servants were helpless tools in the hands of Jesuits; that he had improper intimacy with the nurse who under the influence of Jesuits was poisoning his child. As a result of such a disquieting condition of mind she became an intolerable nuisance to every individual in the household, both by day and night, insisting on entering bedrooms at night, inspecting underneath the servants' beds for Jesuits of male persuasion, and performing various other outrageous acts.

Confinement in an asylum was at last determined on. Mr. Hatherly, the family medical man, having known her for years, had no difficulty in writing a thorough-going substantial certificate, but he neither initiated

proceedings nor had aught else to do with the matter. The judge charged the jury wisely; but with remarkable stupidity the jury found, (1), that Miss Neaves was not insane when so certified; but, (2), that Mr. Hatherly was not guilty of negligence in granting a certificate. Comment is needless.

A LETTER FROM LONDON.

We have received the following notes from London from Dr. C. W. Pilgrim, of the New York State Lunatic Asylum:

THE HOLLOWAY SANITORIUM.—The Holloway Sanatorium, St. Ann's Heath, Virginia Water, about twenty miles from London, was opened by the Prince of Wales on the 15th of June.

This institution is intended for the care and treatment of the insane of the middle class, and the rates will range from twenty-five shillings (\$6.25) per week upwards, according to the requirements of the case. In special cases the terms may be still further reduced by the committee, or patients without means may even be received gratuitously where there is a fair prospect of cure. On the other hand patients paying a higher rate may have private rooms and special attendants. There are also a few cottages on the grounds for the use of patients whose friends are able and willing to pay for such accommodation.

This Sanatorium takes its name from its founder, Mr. Thomas Holloway, but the credit of its inception is due to Lord Shaftesbury, to whom the English people and the world in general, owe so much. Nearly a quarter of a century ago Lord Shaftesbury propounded a scheme for founding a benevolent asylum for the mentally afflicted of the middle class, but it unfortunately fell through for lack of financial support. He,

however, never ceased to agitate the question whenever an opportunity offered, and in a speech in Freemasons' Hall, in the early part of 1881, he said that while the rich were provided for in private asylums and the very poor in county asylums, there was no adequate provision for the insane of the middle class. To all above the pauper class, to whom insanity had come, there were three classes of asylums open—the single house for single patients, the licensed house for a number of patients, and the registered hospital. The two former, he said, were objectionable on account of the expense, and he strongly advocated the claims of the registered hospital founded by private contributions, and urged upon his hearers more benevolence in that direction. The seed then sown did not fall on barren ground. Mr. Holloway, who had amassed an immense fortune, was desirous of devoting a part of it to some charitable work which would not pauperize the recipients, and Lord Shaftesbury's scheme commended itself to his mind. He thereupon resolved to found for the accommodation of the insane of the middle class, an asylum which should be self-supporting. A charming site of twenty acres of land was purchased at Virginia Water, within a mile of Windsor Great Park, and the sum of £300,000 was set aside for the laying out of the grounds and the erection and furnishing of the buildings. Although the institution has been formally opened, only a small portion of the building is ready for the reception of patients. More than the original sum has already been expended, and it is estimated that when the building is furnished throughout and ready for occupancy, the cost per bed will not be far short of £3,000.

Mr. Holloway died in 1883, but his brother-in-law, Mr. George Martin Holloway has carried on the work.

He travelled extensively throughout Europe and the United States for the purpose of visiting and enquiring into the management of similar institutions, and has spared no pains to make the Sanatorium what its founder would have desired.

The building is situated on an eminence and commands fine views of the surrounding country. It is made of red brick with trimmings of Portland stone, and is in the style of the early English Renaissance. It may be described as a quadrangle, of which the principal front is 530 feet in length and one half as much in depth. In front is a projection consisting of the great hall, and immediately behind this and over the granite stair case, is a square tower, rising to the height of 145 feet, with a slate roof and pinnacles at the corners. The wings of the buildings are broken up by high gables and the separate suites of apartments are isolated from each other except by a general communicating corridor. As social life has been the object sought for, the sleeping apartments, with a few exceptions, are on the upper floors, whilst the ground floor is devoted to sitting rooms which are elegantly frescoed and furnished. Works of art adorn the walls, richly upholstered chairs and couches are on every hand, heavy carpets cover the floors, plants are so numerous that one almost imagines himself in a tropical garden, while roses and stained glass give the whole place an appearance of elegance and splendour which must be seen to be appreciated. It is truly an asylum *de luxe*.

The parts upon which the greatest amount of expenditure has been lavished are the entrance hall, the recreation room and the dining hall. The entrance hall is wide, arched and handsomely decorated, and has an imposing stair case, with massive marble handrails,

leading to the recreation room, which is 80 feet long, 40 feet wide and 60 feet high. It is well lighted by stained glass windows, and no spot on the walls or roof is left undecorated. A series of full length portraits of celebrated persons are let into the walls. Among them are those of the Queen, the Prince and Princess of Wales, Lord Nelson, Lord Beaconsfield, the founder and his wife, Mr. Martin Holloway, and others. The dining hall rivals the recreation room in elegance. It is 54 feet long, 32 feet wide and 40 feet high, with an open timber roof, and its walls are completely covered with decorative paintings. The flooring in both the dining hall and recreation room is of square oak blocks. All this portion of the building is lighted by electricity.

The chapel is situated about one hundred yards from the main building and is 92 feet long, 35 feet wide and 55 feet high. The floor is of black and white marble and the ceiling is of oak. At the entrance are two vestries with a spacious organ-loft above. The whole building is more like the house of an aristocratic and wealthy club than an asylum, and as Dr. Philipps says in his circular, "The apartments are unparalleled for their magnificence and elaborate decoration."

As is well known, Mr. Holloway's great fortune was made by selling pills and ointments to a credulous public, and, while standing in the midst of all this splendour, the thought arises that there is a sort of ironical humour, not to say retributive justice, in the fact that so much of it has been devoted to the erection of a hospital for the care of the insane.

FATAL ASSAULT ON DR. METCALF.

Not many months have elapsed since we had occasion to chronicle desperate assaults made by homicidal madmen on two English Superintendents, and these had followed, at short intervals, on similar acts of violence at home and on the continent of Europe. In this country the States of New York and Michigan have each been called upon to mourn the loss of asylum physicians, killed while at their posts of duty, and other States have narrowly escaped a like misfortune. Now the tears of Canada are shed over the grave just closed of one of her ablest superintendents who died by violence at the hands of one of his patients. The details of the tragedy are as follows:

On the morning of the 13th August, Dr. Metcalf and his assistant, Dr. Clarke, were making their usual round through the wards of the Rockwood Asylum, and had reached the new cottage, where the open door system is in force. As they passed along one of the halls a patient, named Patrick Maloney, who was standing in a doorway, suddenly wheeled and rushed at Dr. Metcalf, striking him a violent blow in the abdomen. Dr. Clarke felt satisfied that Maloney's assault was intended to be a serious one, though he did not at first realize that the patient was armed with a knife. Dr. Metcalf walked off in the direction of a sitting-room, while Maloney and Dr. Clarke struggled for some time in the hall, Maloney trying without success to turn upon the doctor with the knife. Seeing Dr. Metcalf was about to fall, Dr. Clarke threw Maloney from him, and the patient darted through the doorway as rapidly as possible. Dr. Clarke then carried the superintendent in his arms to the main building, a distance of about

leading to the recreation room, which is 80 feet long, 40 feet wide and 60 feet high. It is well lighted by stained glass windows, and no spot on the walls or roof is left undecorated. A series of full length portraits of celebrated persons are let into the walls. Among them are those of the Queen, the Prince and Princess of Wales, Lord Nelson, Lord Beaconsfield, the founder and his wife, Mr. Martin Holloway, and others. The dining hall rivals the recreation room in elegance. It is 54 feet long, 32 feet wide and 40 feet high, with an open timber roof, and its walls are completely covered with decorative paintings. The flooring in both the dining hall and recreation room is of square oak blocks. All this portion of the building is lighted by electricity.

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one hundred and fifty yards. Telephonic messages were at once sent summoning other medical aid. Dr. Lavell and other Kingston physicians were promptly at hand, and everything possible was done to make the sufferer comfortable. A very serious wound was found in the lower part of the left side of the abdomen, through which nearly the whole of the intestines protruded. These, however, had not been materially injured. There was also a second, but insignificant cut in the back of the thigh. Dr. Metcalf was remarkably calm and brave, not only during and after the assault, but throughout his illness, remaining quite conscious through all to the end, some seventy-five hours afterwards. But he never rallied from the primary shock. During Thursday night he slept a little, but not naturally, being greatly relieved by the frequent use of morphia. His temperature was kept down, while his pulse was fitful and weak, and on Friday morning 140. His distress was aggravated by a constant thirst, and irritability of the stomach occasioning severe retching and vomiting. On Friday morning his physicians found it necessary to re-open the wound, as the oozing from it had been constant and copious. During the day he appeared to be rapidly sinking, but passed a comparatively favorable night.

The hope of recovery, which buoyed up some on Saturday, was early dissipated. The improvement was of a transitory character. The energies of the wounded man flagged markedly. From Saturday afternoon until the final scene sorrow was depicted on every countenance. The doctors drove cheerfully away on Saturday forenoon; when they appeared at 9.30 o'clock P. M., they found Dr. Metcalf weaker and unable to retain anything upon his stomach. His mind was clear. Hemorrhage had ceased, but there was a discharge of

pus. The man's voice was clear, he was conscious, yet less hopeful himself of the result. The medical men made him as comfortable as possible and left. On Sunday morning the remedies applied on the previous evening had prevented vomiting from 11 until 4 o'clock, and his rest had been comparatively good. Later on the vomiting resumed and continued unabatedly, thus adding to the prostration. Dr. Metcalf spoke to the physicians of his condition. He was remarkably brave, however, through it all. During the forenoon he conversed affectionately with his wife and relatives upon various matters. He asked that his two daughters be brought to his bedside, and he lovingly kissed them farewell. The parting was particularly pathetic. The staff in the asylum were recognized and spoken to, and he thanked his physicians for their attention. He was conscious that they had done all that mortal men could do to aid him. He then requested that all kind friends should be thanked for the solicitude manifested about his case. Then he asked for Rev. Mr. Cartwright. That gentleman came and together they conversed and had prayer. To Dr. Lavell, an old and tried friend, he said he was fully resigned and all references to the future and to his trustfulness in Christ were pleasingly received. Between 12 and 1 o'clock the patient grew rapidly weaker. His voice became feeble, and his mind occasionally wandered. Up to 2.45 he, however, at times was able to recognize his friends, especially his wife, who sat near to his couch. In his delirium he was restless, but after 2.45 o'clock he passed into a slumber. At 3.10 o'clock loving hands closed the eyelids, friends were led away, and from the sick chamber there was wafted home the spirit of a just man made perfect through sufferings. "With gladness and rejoicing shall

they be brought; they shall enter into the King's palace."

A post mortem examination was held on Sunday night. The wound, on the left side of the abdomen, was irregular in shape and very deep, such as would be inflicted by a knife fully three inches long. The weapon had been plunged into the body with considerable force. It struck the side of the pelvic bone, glanced off, escaping the large vessels. No artery of any moment was divided. The replacement of the intestines had been satisfactorily effected. The peritoneum and bowels were found congested and inflamed. Much blood had oozed into the abdominal cavity. Death was caused by the shock, by the congestion and inflammation.

The funeral occurred August 18th and 19th, and was largely attended. Flags floated at half mast, and respect for the deceased was everywhere shown. The body was carried to Uxbridge, the scene of Dr. Metcalf's boyhood, and there buried.

A biographical sketch of the deceased appears elsewhere.

Dr. Lavell, an old friend of the deceased and his family physician is reported to have said of him: "Metcalf was a rare good man for the position he occupied. His temperament was all that could be desired. His official intercourse with his staff was of the kindest character, he was firm, had good administrative ability, and everything proceeded smoothly from the time he entered the asylum as its head. The patients loved him—at least all those whose minds were capable of judgment—his intercourse with them being such as to attach them to him. I was greatly struck, throughout his illness, by his thoughtfulness of family, friends and associates. This thoughtfulness continued till the last. Even in the most trying moments he was deliberative

and cool. I never saw a braver man. He was not agitated at any time. If ever a Christian has gone home to heaven I believe Dr. Metcalf has."

Patrick Maloney, the assailant, went to the asylum in September. He had been sent to gaol from the rear of Frontenac for arson. He was afterwards adjudged insane and sent to the asylum. He suspected that persons were continually following him and trying to poison him. He is about 55 or 60 years of age. He had a hang-dog look, and was very uneasy. He was a lazy fellow and very much disinclined to work. It appears that he had been in the asylum before. He walked up and down his cell continuously while in gaol. He was also very snarly in his disposition.

After the assault, Maloney was found by his attendant standing quietly on the lawn. He asked, "Maloney, what's that you've been doing now?" Maloney replied, with a horrible oath, that he thought he had at last given the doctor his blood money. Lanigan said, "You'll have to go with me," and they started for the main building. When about to enter the enclosure at the main building Lanigan asked Maloney for the knife, and he drew it from his pocket. The butcher, who was also present, made a jump for it when Maloney, with another oath, shouted "Stand off, or I'll give you a dab with it." He gave the knife to Lanigan, after which he was placed in a single room in the main building. It seems that the assassin had the liberty of the grounds. He usually ate his breakfast about 7.30 o'clock, and going out, paced about, slept or played euchre. He wouldn't work, because, as he asserted, there were men paid to do it. At meals he never drank the tea poured out for him, claiming that it was poisoned. He would wait and drink after the other patients had finished. He had been in the chronic ward since last November

The doctor always treated the man with all possible kindness. The knife used by him was an improvised one. The blade was about three inches long, bright and sharp. It was fixed into a handle, though it overlapped when shut by a quarter of an inch. It is probable that he secured the blade in one place and the handle in another, and, putting them together, constructed his weapon.

In August, 1884, Patrick Maloney was sent to gaol to wait his trial for arson. A few days after his admission Dr. Oliver, gaol surgeon, reported him to the sheriff as insane. A board of examination was then held, consisting of Drs. Sullivan, Oliver and Judge Price. Dr. Sullivan, in his report, pronounced the man perfectly sane, and not a fit subject for an insane asylum; that he was neither vicious nor criminal, but broken down through poverty and hard usage. Judge Price certified that the man was weak in body and mind, and unfit to take care of himself. Dr. Oliver said Maloney was insane and dangerous to be at large; that he ought to be restrained and carefully watched; that he would probably become worse and likely suicidal; that he was restless, sullen and had delusions that persons were trying to poison him. Upon this examination he was not sent to the asylum, but still held for trial at the assizes in September, 1884. He was indicted for arson and a jury empannelled, but he was not tried for the offense, the judge directing the jury to ascertain first his mental condition. Dr. Sullivan again reiterated that he considered the man perfectly sane, and that there were hundreds of men walking the streets no worse than Maloney was. A gaol official, so far as he knew, considered the man sane. The jury, however, reported him insane, and he was then transferred to the asylum.

NOTES AND COMMENTS.

THE CASE OF LOUIS RIEL.—The northwest of Canada has had a rebellion of the half-breeds and Indians. As its inception, it was fomented by a half-breed of the name of Louis Riel. After several fights with the volunteers, his bands were scattered and he was made prisoner. He gave himself up, but the fighting leaders escaped into the United States. Riel was tried for treason last July, at Regina, in one of the territories, and the defense was insanity. Riel had been the leader of a rebellion at Winnipeg, in 1870, but an expedition under General Wolsely scattered his forces and he escaped. At the recent trial it was shown that he had been in two asylums as a patient. Once in Longue Pointe, Montreal, and once in Beauport, Quebec. It was shown that on these occasions he had been afflicted with megalomania. His ideas are, that he is to be the great centre of religious and political movements in the world. He is a prophet, and can foretell future events. He is yet to establish a new papacy and pope in St. Boniface, Manitoba. He is to divide the northwest into seven kingdoms, among divers nationalities, and over this heptarchy he is to be supreme ruler. Christ is ever present with him in person, and he has set chairs for Him to sit on and has laid by food for Him to eat. During the fighting he ran about holding aloft a crucifix and kept constantly calling on the Trinity. These and many other delusions were certified to at the trial. Among ignorant Indians and half-breeds he was looked up to as a man inspired, and being educated and eloquent his influence was great. The principal leaders of the rebellion made a figure-head of Riel. He is indignant at being called insane

and wished to discharge his counsel for putting in that plea. It would destroy his idea of greatness and power to declare him a lunatic. Like all such, he possessed a good deal of shrewdness and cunning. The three experts called on the trial were Dr. Ray of Quebec, Dr. D. Clarke, Toronto, and Dr. Wallace, Hamilton. The first two stated that, assuming the testimony to be correct, there was no doubt of the man's insanity. Dr. Clarke said although that was his impression, yet it was absurd to expect any medical man to definitely come to a conclusion of the mental condition of such a man with a cursory examination. Dr. Wallace could see no insanity in him after half an hour's examination, but would not say he was sane. The jury brought in a verdict of guilty with a recommendation to mercy. The jury was not convinced of Riel's sanity.

OVERCROWDING IN MASSACHUSETTS.—The *Boston Medical and Surgical Journal*, September 10, 1885, calls attention editorially to an overcrowding and lack of classification in asylums in Massachusetts that render proper hospital organization impossible. It speaks in moderation of what is known to have been the condition of the Danvers hospital for more than a year past, when it says that, "in spite of most excellent management on the part of the physicians, it has been a disgrace to the Commonwealth." We are told that from one to two hundred patients have been obliged to occupy beds placed upon the floors of the wards at night, and to suffer corresponding inconveniences by day, that proper classification has been made impossible, that personal privacy has been interfered with, that attendants and physicians have been wearied, and their time has been consumed in meeting these exceptional difficulties. This deplorable evil is less bearable from the

fact that it arises partly from easily preventable causes, namely, a lack of system in the selection of cases for hospital treatment.

Our contemporary justly takes exception to that perversion of the function of a hospital for the insane which makes it "a convenient dumping ground for all cases of degenerative nervous diseases attended with mental failure" which are disagreeable to care for elsewhere or whose care elsewhere costs more than at the asylum.

The urgent need of providing inexpensive buildings for chronic cases, and thus relieving the pressure at Danvers and other asylums, was fully represented to the last State Legislature, but no action was taken by it. Overcrowding of the insane is not unknown in other States, and in New York the necessity is arising for increased accommodation, but we know of no Commonwealth in which the need of immediate action is more pressing than in Massachusetts. Surely we have a right to expect better things from the Bay State!

TRAINING SCHOOL FOR ATTENDANTS.—The Board of Managers of the Buffalo State Asylum for the Insane, with a desire to improve and elevate the standard of service in the care of the insane, have established a training school for their instruction and education. This plan is the outgrowth of a system begun by the officers of the asylum in October 1883, among a limited number of attendants. The special training of the school is given by the Assistant Physicians, under the direction of the Superintendent, in such studies and methods as will best fit those who receive the instruction for the special work of attendants upon the insane and for nursing the sick. The course will occupy two years, and will consist of lectures and clinical instruction.

The lectures are given on the fundamental principles of physiology, and of hygiene, including ventilation, clothing, bathing, etc., with the usual directions for the care of the person, the bed, and the room of the sick. Instructions is given upon the most commonly used remedies and their effects, upon the use of the catheter, the taking of temperatures, the administration of food, the control of hemorrhage, and the application of minor dressings. Special attention is given to teaching the best methods of caring for the various classes of the insane, the violent, destructive, suicidal, and epileptic, as also the quiet and convalescent, with directions as to exercise, occupation, amusement and companionship. They are taught to meet emergencies, how and what to observe, and to make written reports upon the physical and mental condition of patients. All who join the training school shall, at the end of the first year, pass a satisfactory examination, before entering on the second year's instruction. At the close of the second year, after passing the required examination, and giving satisfactory service, they shall receive a certificate from the institution as well qualified nurses and attendants upon the insane.

The pay of all attendants shall remain as at present fixed by the Board of Managers, except as hereinafter specified. Those who take advantage of the instruction of the school shall receive, after passing the examination at the end of the first year, the women at the rate of fifteen and the men at the rate of twenty-five dollars per month, and two weeks' vacation annually thereafter without deduction of pay, at a time subject to the convenience of the asylum. After passing the examination at the close of the second year, and receiving a certificate of qualification as trained nurses and attendants, they shall be paid, the women at the

rate of eighteen and the men at the rate of twenty-eight dollars per month respectively.

The trained attendants who are placed in charge of wards shall be paid, the women at the rate of twenty and the men at the rate of thirty dollars per month respectively. The acceptance of the advanced pay attached to these propositions shall carry with it the obligation to remain in each case at least one year longer in the service of the asylum, subject to the provisions of the agreement. For long and faithful service an increase in the pay per month may be provided in special cases.

INAUGURATION OF THE PINEL MONUMENT.—The last number of *l'Encéphale* gives an interesting account of the inauguration of the statue erected by the Medico-Psychological Society of Paris to the memory of the illustrious Pinel. A year has passed since the monument was unveiled, but the society was desirous that the formal tender of its gift to the city of Paris should occur with appropriate ceremonies, and thus atone in a measure for the tardiness of its homage to him who was "at once the benefactor of the insane and the creator of mental medicine." The inauguration took place on July 31st, ultimo, in presence of a brilliant assembly.

The principal group, executed with great artistic skill by Ludovic Durand, is of bronze and comprises two figures. Pinel standing erect holds in his right hand broken chains; at his feet a young female patient is gathering flowers and turns with grateful look to him who has just accomplished her release. On either side of the pedestal are two large stone statues representing *Science* and *Philanthropy*. In the middle is engraved in letters of gold the following legend:

A PHILIPPE PINEL
BIENFAITEUR DES ALIENES
LA SOCIETE MEDICO-PSYCHOLOGIQUE

Dr. Dagonet, of the St-Anne Asylum, President of the Medico-Psychological Society, opened the ceremonies with a short speech. Dr. Robinet, in the name of the Municipal Council of Paris; M. Ponbelle, Prefect of the Seine; Dr. Legrand Du Saulle, of La Salpêtrière; Dr. Ritti, Secretary-General of the Society, and M. Pichon, Municipal Councillor of the Salpêtrière Quarter, thereupon spoke in turn.

The exercises concluded with a lunch given by the Medico-Psychological Society in the consultation rooms of La Salpêtrière. Everything had been perfectly organized by Dr. Motet.

Nowhere is the Frenchman more at home than in the pronouncement of an eulogy, and this was a brilliant occasion for the exhibition of a national characteristic. The speakers vied with each other in oratory, and their addresses comprise twenty pages of beautifully turned periods in *l'Encéphale*. These pages are alike profitable and pleasurable to the reader, furnishing as they do a memorable chapter in the history of the insane, not only in France but in the entire world. We prosaic Americans might well learn lessons in chivalry from our French brethren whose instincts lead them, as Dr. Legrand Du Saulle remarked, to honour genius wherever found. "For us," he said, "public acknowledgment has imprescriptible rights. Its expression may occur after long lapse of time but the hour of reparation will surely come sooner or later."

SEA AIR FOR CONVALESCENT PATIENTS.—Under a conviction that better accommodations and different surroundings should be secured for their convalescent patients, the managers of the Friends' Asylum for the Insane at Frankford, near Philadelphia, have opened a house at Atlantic City, on the New Jersey coast. To

this branch asylum are admitted, in addition to patients from the Frankford Asylum, cases of mental disease of a mild type who require care and medical treatment. In all instances patients will be admitted in conformity with the laws of Pennsylvania.

Gurney Cottage is under the care of Dr. J. C. Hall, Superintendent of the Frankford Asylum, assisted by the attending and consulting physician in Atlantic City, the former of whom visits the patients daily. It is presided over by a competent matron, and specially qualified nurses have been engaged. Accommodation has been provided for ten patients, eight women and two men.

This seems to be a step in the right direction, and the success that has attended the venture has been very encouraging. The house has been full since its opening, and it is proposed to keep it open during the entire year. As is well known the climate of Atlantic City is comparatively mild during the winter. We congratulate the managers and superintendent of the Frankford Asylum on their enterprise, and venture to predict much prosperity for Gurney Cottage.

THE ADMISSION OF VISITORS TO ASYLUMS.—We believe it to be the policy of many State asylums for the insane to admit to their wards all or nearly all persons who apply for that purpose during certain hours. The public has come to regard such admission as a right, and there are those who resent exclusion from the premises, even on holidays, as an outrage on their privileges as tax-payers. Partly in concession to such feeling, and partly from a desire of the officers to accord freer access to the wards, a gradual relaxation in the established rules regarding visitors to the New York State Lunatic Asylum at Utica was permitted.

These rules were framed eighteen years ago, and required that general visitors should not be admitted except upon presentation of a card signed by a manager or the treasurer. For a time no evil effects followed this wider extension of privilege, and soon it became customary to admit the general public every afternoon except holidays and Sundays. After a while, however, abuses became apparent. The asylum came to be a favorite resort of mere sightseers, many of whom visited the institution repeatedly and at short intervals throughout the year. In a great number, perhaps the majority, of instances, these persons were of immature age, and not actuated by worthy motives. Their chief desire seemed to be to see the "worst cases," as they phrased it, and they oftentimes went away fully convinced that there were patients locked up in "cells" whom they had not seen, and this notwithstanding positive assurances to the contrary. No benefit can accrue either to individuals or to institutions by gratifying an idle and morbid curiosity of this kind. Moreover, the discipline and quietness of an asylum must needs thus be interfered with, while, what is worse, the patients' privacy is needlessly intruded upon.

Some time ago the old rules were re-established and re-enforced at Utica. The diminution in the number and character of visitors has been quite marked since this course was adopted, and the patients have little occasion to complain, as they formerly did, of the heedless remarks and significant looks to which they were constantly exposed under the old plan. Exceptions to these rules are properly made in favor of the relatives of patients, and official, professional and scientific persons.

TYPHOID FEVER AT MORRIS PLAINS ASYLUM.—Several cases of typhoid fever have lately occurred among the employés and patients at Morris Plains, N. J. The disease seems to be attributable to a faulty disposition of the sewage of the institution, into the details of which we shall abstain from entering at present. At latest accounts there had been twenty-three cases with four deaths, the latter having occurred in previously debilitated patients. The Health Board are now considering the matter, but have not yet made public their opinion. The problem is one requiring much thought and will probably involve heavy expenditure. We wish the sanitary experts Godspeed in their important labors. Meanwhile, we are pleased to hear that the worst is apparently past, and that the cases are nearly all of a mild character.

ASYLUM APPOINTMENTS.—*Arkansas.*—Dr. P. O. Hooper, until recently president of the Board of Trustees, has accepted the Superintendency of the State Lunatic Asylum at Little Rock, Arkansas. Dr. Hooper has been identified with the asylum since the board organized in 1880, and is thoroughly familiar with the details of management. The appointment gives universal satisfaction. We regret that the vacancy has been occasioned by the failing health and enforced resignation of Dr. C. C. Forbes, who retires from the position that he has worthily filled as first superintendent, with the best wishes of his friends that his health may be speedily restored.

Michigan.—Dr. R. O. Long has been appointed superintendent of the Michigan Asylum for Insane Criminals at Ionia.

Dr. James D. Munson, [for] several years assistant

These rules were framed eighteen years ago, and required that general visitors should not be admitted except upon presentation of a card signed by a manager or the treasurer. For a time no evil effects followed this wider extension of privilege, and soon it became customary to admit the general public every afternoon except holidays and Sundays. After a while, however, abuses became apparent. The asylum came to be a favorite resort of mere sightseers, many of whom visited the institution repeatedly and at short intervals throughout the year. In a great number, perhaps the majority, of instances, these persons were of immature age, and not actuated by worthy motives. Their chief desire seemed to be to see the "worst cases," as they phrased it, and they oftentimes went away fully convinced that there were patients locked up in "cells" whom they had not seen, and this notwithstanding positive assurances to the contrary. No benefit can accrue either to individuals or to institutions by gratifying an idle and morbid curiosity of this kind. Moreover, the discipline and quietness of an asylum must needs thus be interfered with, while, what is worse, the patients' privacy is needlessly intruded upon.

Some time ago the old rules were re-established and re-enforced at Utica. The diminution in the number and character of visitors has been quite marked since this course was adopted, and the patients have little occasion to complain, as they formerly did, of the heedless remarks and significant looks to which they were constantly exposed under the old plan. Exceptions to these rules are properly made in favor of the relatives of patients, and official, professional and scientific persons.

TYPHOID FEVER AT MORRIS PLAINS ASYLUM.—Several cases of typhoid fever have lately occurred among the employés and patients at Morris Plains, N. J. The disease seems to be attributable to a faulty disposition of the sewage of the institution, into the details of which we shall abstain from entering at present. At latest accounts there had been twenty-three cases with four deaths, the latter having occurred in previously debilitated patients. The Health Board are now considering the matter, but have not yet made public their opinion. The problem is one requiring much thought and will probably involve heavy expenditure. We wish the sanitary experts Godspeed in their important labors. Meanwhile, we are pleased to hear that the worst is apparently past, and that the cases are nearly all of a mild character.

ASYLUM APPOINTMENTS.—*Arkansas.*—Dr. P. O. Hooper, until recently president of the Board of Trustees, has accepted the Superintendency of the State Lunatic Asylum at Little Rock, Arkansas. Dr. Hooper has been identified with the asylum since the board organized in 1880, and is thoroughly familiar with the details of management. The appointment gives universal satisfaction. We regret that the vacancy has been occasioned by the failing health and enforced resignation of Dr. C. C. Forbes, who retires from the position that he has worthily filled as first superintendent, with the best wishes of his friends that his health may be speedily restored.

Michigan.—Dr. R. O. Long has been appointed superintendent of the Michigan Asylum for Insane Criminals at Ionia.

Dr. James D. Munson, [for] several years assistant

physician to the Eastern Michigan Asylum at Pontiac, has been elected superintendent of the new Northern Michigan Asylum at Traverse City. It is expected that this asylum will be ready to receive patients in November.

New Jersey.—Dr. Edwin E. Smith has been appointed superintendent of the State Asylum for the Insane at Morris Plains, N. J., *vice* Dr. H. A. Buttolph, resigned. Dr. Smith had been assistant superintendent for several years, previously to which he was an assistant physician at the New York State Lunatic Asylum at Utica.

Canada.—The vacancy in the superintendency of the Rockwood Asylum, at Kingston, Ontario, occasioned by the lamentable death of Dr. Metcalf, has been filled by the promotion of Dr. C. K. Clarke, late assistant physician and brother-in-law of the deceased.

Dr. Millman, of the London Asylum, Ontario, has been promoted to the position of Assistant Medical Superintendent of the Rockwood Asylum, Kingston.

Dr. Robinson, Second Assistant Physician of the Toronto Asylum, has been transferred to the London Asylum and promoted.

CASE OF LOUIS RIEL.—As we go to press we learn that arrangements have been made to send an appeal in Riel's behalf to the Privy Council. A committee having the matter in hand have gone to England for that purpose. Riel's reprieve extends to October 16. Meanwhile, a manifesto has been issued calling upon the French press, and notably *La Minerve*, to take the matter in hand and make it a public question, or else not to oppose those who are working in the direction of obtaining a settlement of the grave constitutional points at issue.

OBITUARY.

DR. W. G. METCALF.—Dr. W. G. Metcalf, the late Superintendent of Kingston Asylum for Insane, was born in 1847, in the town of Uxbridge, Ontario. He began asylum life in Toronto on the 7th August, 1871, as clinical assistant to the venerable Dr. Workman, and here it was he laid the foundation of his future success and learned the broad principles of true humanity. In 1874 he left Toronto Asylum to engage in private practice, but in a few months returned to the work most congenial to him, and was installed as Assistant Medical Superintendent of Toronto Asylum, which position he filled until June, 1877, when he was transferred to a similar post in the London Asylum. In April, 1878, he was placed in temporary charge of Kingston Asylum during the illness of Dr. Dickson, and when the latter retired from the service, was appointed Medical Superintendent, a position he continued to occupy until he fell at his post of duty.

On the morning of the 13th August, 1885, while making his usual round in company with his assistant, he was fatally stabbed in the abdomen by a criminal lunatic, and although he lingered for a time, never rallied from the shock and passed away in peace on the 16th August, 1885. The events connected with his death, fill the saddest chapter yet written in the history of Canadian asylums, and the cruel fate of so promising a man, is deplored by the whole community. As a practical administrator Dr. Metcalf had few equals and no superior. His creed was taught him by his well loved preceptor, Dr. Workman, and its prominent characteristic was "my patients first." He was an enthusiastic worker in his specialty and a believer in details, spar-

ing no pains to master every point in connection with any labor he undertook, and his wonderful genius for mechanics rendered him particularly efficient as a practical manager of asylum affairs. His prominent mental features were earnestness, sincerity and love of justice. At the time of his death he was a firm believer in non-restraint, although when he adopted this system on trial three years ago, he was convinced that non-restraint could not be carried out. He never forgot that insane patients are human beings and at all times had a pleasant smile and kind word for the unfortunates under his care. As he lived, so he died, thoughtful of all but himself, and as he felt the near approach of death, summoned his officers to his bedside and bade each one an affectionate farewell, with almost his last breath saying "wish the attendants good bye for me and tell them my hope is that they will all continue their work patiently and perseveringly." No murmur of reproach for his sad fate escaped his lips—the painful illness was borne with heroic fortitude and the poor fellow died in his private office as most brave men wish to die, at the post of duty.

Modestly he lived—bravely he died—and by deeds, not words, built for himself a monument more lasting than brass.

GEORGE LEIB HARRISON.—G. L. Harrison, a prominent merchant and citizen of Philadelphia, who for many years had taken a keen interest in all matters pertaining to lunacy in Pennsylvania and throughout the world, died September 9, 1885, aged seventy-three years.

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The JOURNAL is now in its forty-second volume. It was established by the late Dr. Brigham, the first Superintendent of the New York State Lunatic Asylum, and after his death edited by Dr. T. Romeyn Beck, author of "Beck's Medical Jurisprudence;" and since 1854, by Dr. John P. Gray, and the Medical Staff of the Asylum. It is the oldest journal devoted especially to Insanity, its Treatment, Jurisprudence, &c., and is particularly valuable to the medical and legal professions, and to all interested in the subject of Insanity and Psychological Science.